

2. Specifications

Characteristics	Item	Specifications		
		1 Form A	1 Form A 1 Form B	2 Form A
Contact	Arrangement	1 Form A 1 Form A 1 Form B 2 Form A		
	Contact resistance (Initial)	Max. 30 mΩ (By voltage drop 6 V DC 1A)		
	Contact material	Au-flashed AgSnO ₂ type Au-flashed AgNi type		
Rating	Nominal switching capacity (resistive load)	10 A 250 V AC, 10 A 30 V DC	8 A 250 V AC, 8 A 30 V DC	8 A 250 V AC, 8 A 30 V DC
	Max. switching power (resistive load)	2,500VA, 300 W	2,000 VA, 240 W	2,000 VA, 240 W
	Max. switching voltage	250 V AC, 125 V DC (0.2A)	250 V AC, 125 V DC (0.2A)	250 V AC, 125 V DC (0.2A)
	Max. switching current	10 A	8 A	8 A
	Min. switching capacity (Reference value)*1	10m A 5 V 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 1min. (Detection current: 10mA.)	
		Between contact and coil	4,000 Vrms for 1min. (Detection current: 10mA.)	
	Surge breakdown voltage*2 (Initial)	between contacts and coil	10,000 V	
	Operate time [Set time] (at 20°C 68°F)	Max. 10 ms (Approx. 5 ms) [10 ms (Approx. 5 ms)] (Nominal coil voltage applied to the coil, excluding contact bounce time.)		
Release time [Reset time] (at 20°C 68°F)	Max. 8 ms (Approx. 3 ms) [10 ms (Approx. 3 ms)] (Nominal coil voltage applied to the coil, excluding contact bounce time.) (without diode)			
Mechanical characteristics	Shock resistance	Functional	Min. 98 m/s ² (Half-wave pulse of sine wave: 11 ms; detection time: 10μs.)	
		Destructive	Min. 980 m/s ² (Half-wave pulse of sine wave: 6 ms.)	
	Vibration resistance	Functional	10 to 55 Hz at double amplitude of 1.5 mm (Detection time: 10μs.)	
		Destructive	10 to 55 Hz at double amplitude of 3 mm	
Expected life	Mechanical	Min. 5×10 ⁷ (at 300 times/min.)		
Conditions	Conditions for operation, transport and storage*3	Ambient temperature: -40°C to +65°C -40°F to +149°F, Humidity: 5 to 85% R.H. (Not freezing and condensing at low temperature)		
Unit weight		Approx. 5 g .18 oz	Approx. 6 g .21 oz	Approx. 6 g .21 oz

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.

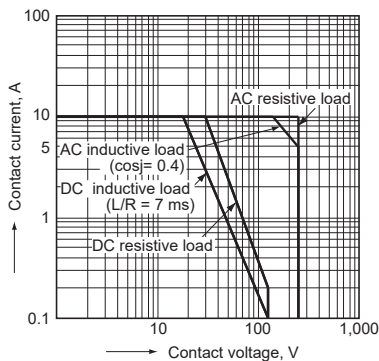
3. Electrical life

Condition: Resistive load, at 20 times/min.

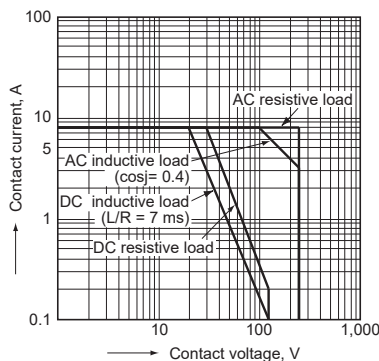
Type	Switching capacity	Number of operations
1 Form A	10A 250V AC 10A 30V DC	Min. 1×10 ⁶
1 Form A 1 Form B, 2 Form A	8A 250V AC 8A 30V DC	Min. 1×10 ⁶

REFERENCE DATA

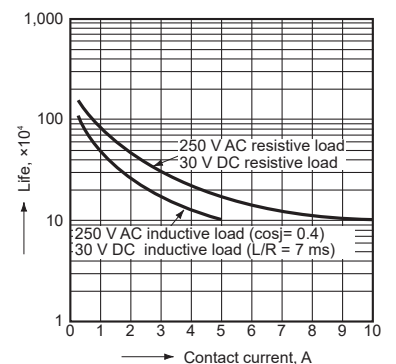
1-(1). Maximum operating power (1 Form A)



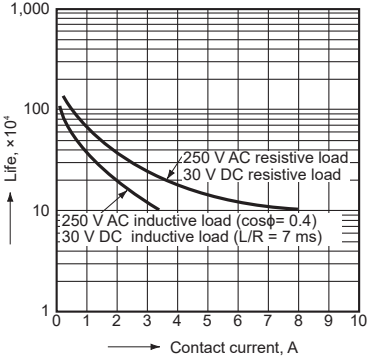
1-(2). Maximum operating power (1 Form A 1 Form B, 2 Form A)



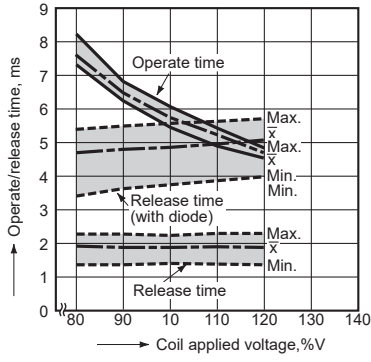
2-(1). Life curve (1 Form A)



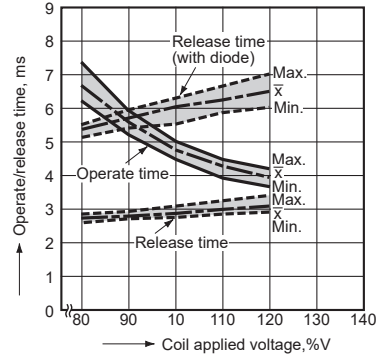
2-(2). Life curve
(1 Form A 1 Form B, 2 Form A)



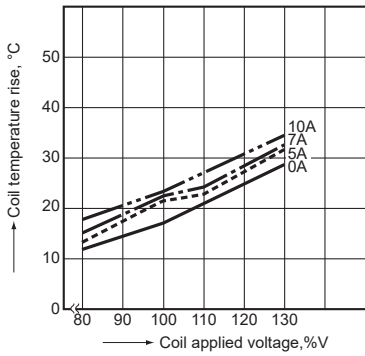
3-(1). Operate/Release time (1 Form A)
Tested sample: DK1a-24V, 5 pcs.



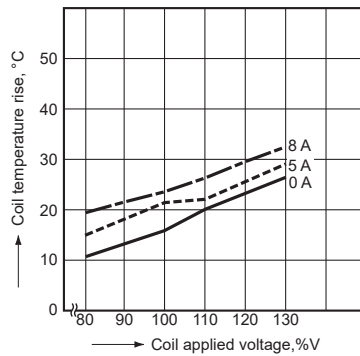
3-(2). Operate/Release time
(1 Form A 1 Form B, 2 Form A)
Tested sample: DK1a1b-12V, 5 pcs.



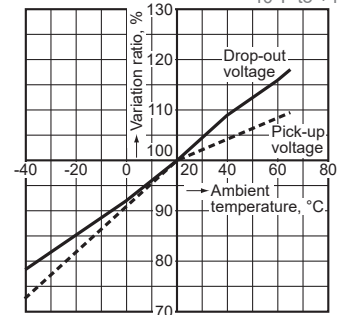
4-(1). Coil temperature rise (1 Form A)
Tested sample: DK1a-12V, 5 pcs.
Ambient temperature: 30°C 86°F



4-(2). Coil temperature rise
(1 Form A 1 Form B, 2 Form A)
Tested sample: DK1a1b-12V, 5 pcs.
Ambient temperature: 20°C 68°F



5-(1). Ambient temperature characteristics
(1 Form A)
Tested sample: DK1a-24V, 6 pcs
Ambient temperature: -40°C to +80°C
-40°F to +176°F



5-(2). Ambient temperature characteristics
(1 Form A 1 Form B, 2 Form A)

