2) 2 coil latching

Type	Nominal coil voltage	Set voltage (at 20°C 68°F)	Reset voltage (at 20°C 68°F)	Nominal operating current [±10%] (at 20°C 68°F)		Coil resistance [±10%] (at 20°C 68°F)		Nominal operating power (at 20°C 68°F)		Coil inductance		Max. applied voltage (at 40°C 104°F)
				Set coil	Reset coil	Set coil	Reset coil	Set coil	Reset coil	Set coil	Reset coil	
Standard	3V DC	70%V or less of nominal voltage (Initial)	70%V or less of nominal voltage (Initial)	66.7mA	66.7mA	45Ω	45Ω	200mW	200mW	Approx. 10mH	Approx. 10mH	5.5V DC
	5V DC			38.5mA	38.5mA	130Ω	130Ω	192mW	192mW	Approx. 31mH	Approx. 31mH	9.0V DC
	6V DC			33.7mA	33.7mA	180Ω	180Ω	200mW	200mW	Approx. 40mH	Approx. 40mH	11.0V DC
	12V DC			16.7mA	16.7mA	720Ω	720Ω	200mW	200mW	Approx. 170mH	Approx. 170mH	22.0V DC
	24V DC			8.4mA	8.4mA	2,850Ω	2,850Ω	202mW	202mW	Approx. 680mH	Approx. 680mH	44.0V DC
	48V DC			7.4mA	7.4mA	6,500Ω	6,500Ω	355mW	355mW	Approx. 1,250mH	Approx. 1,250mH	65.0V DC

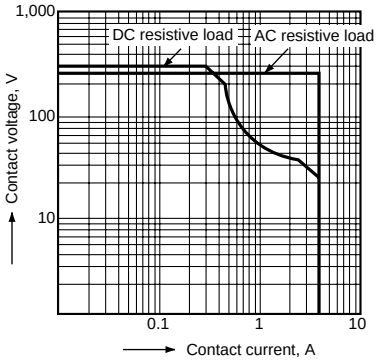
2. Specifications

Characteristics	Item		Specifications
Contact	Arrangement		2 Form A 2 Form B, 3 Form A 1 Form B, 4 Form A
	Contact resistance (Initial)		Max. 50 mΩ (By voltage drop 6 V DC 1A)
	Electrostatic capacitance (initial)		Approx. 3pF
	Contact material		Au clad Ag alloy (Cd free)
	Thermal electromotive force (at nominal coil voltage) (initial)		Approx. 3μV
Rating	Nominal switching capacity (resistive load)		4 A 250 V AC, 3 A 30 V DC
	Max. switching power (resistive load)		1,000 VA, 90 W
	Max. switching voltage		250 V AC, 48 V DC (30 to 48 V DC at less than 0.5 A)
	Max. switching current		4 A (AC), 3 A (DC)
	Minimum operating power		100 mW (Single side stable, 2 coil latching) (Except 48V DC type)
	Nominal operating power		200 mW (Single side stable, 2 coil latching) (Except 48V DC type)
	Min. switching capacity (Reference value)*1		100μA 100 m V DC
Electrical characteristics	Insulation resistance (Initial)		Min. 10,000MΩ (at 500V DC) Measurement at same location as “Breakdown voltage” section.
	Breakdown voltage (Initial)	Between open contacts	750 Vrms for 1min. (Detection current: 10mA.)
		Between contact sets	1,000 Vrms for 1min. (Detection current: 10mA.)
		Between contact and coil	1,500 Vrms for 1min. (Detection current: 10mA.)
	Temperature rise (coil) (at 20°C 68°F)		Max. 35°C (By resistive method, nominal coil voltage applied to the coil; contact carrying current: 4A.)
	Operate time [Set time] (at 20°C 68°F)		Max. 15 ms [15 ms] (Nominal coil voltage applied to the coil, excluding contact bounce time.)
	Release time [Reset time] (at 20°C 68°F)		Max. 10 ms [15 ms] (Nominal coil voltage applied to the coil, excluding contact bounce time.) (without diode)
Mechanical characteristics	Shock resistance	Functional	Min. 490 m/s² (Half-wave pulse of sine wave: 11 ms; detection time: 10μs.)
		Destructive	Min. 980 m/s² (Half-wave pulse of sine wave: 6 ms.)
	Vibration resistance	Functional	10 to 55 Hz at double amplitude of 3 mm (Detection time: 10μs.)
		Destructive	10 to 55 Hz at double amplitude of 4 mm
Expected life	Mechanical		Min. 10^8 (at 50 cps)
	Electrical		Min. 10^5 (4 A 250 V AC), Min. 2×10^5 (3 A 30 V DC) (at 20 times/min.)
Conditions	Conditions for operation, transport and storage*2		Ambient temperature: –55°C to +65°C –67°F to +149°F Humidity: 5 to 85% R.H. (Not freezing and condensing at low temperature)
	Max. operating speed		20 times/min. for maximum load, 50 cps for low-level load (1 mA 1 V DC)
Unit weight			Approx. 8 g .28 oz

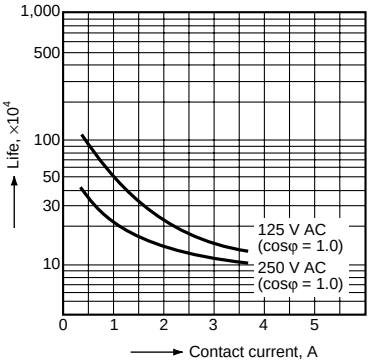
Notes: *1. This value can change due to the switching frequency, environmental conditions, and desired reliability level, therefore it is recommended to check this with the actual load.
*2. The upper limit of the ambient temperature is the maximum temperature that can satisfy the coil temperature rise value. Refer to Usage, transport and storage conditions in NOTES.

REFERENCE DATA

1. Maximum switching power

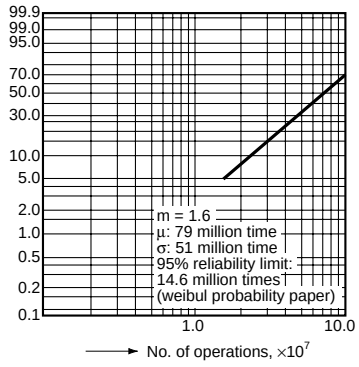


2. Life curve



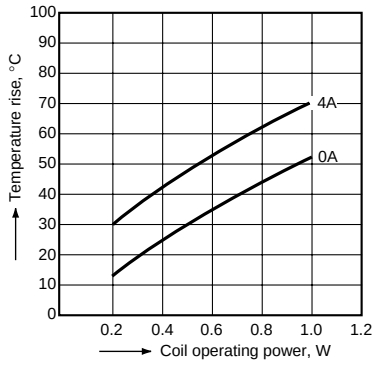
3. Contact reliability

Condition: 1V DC, 1mA
Detection level 10 Ω
Tasted Sample: S4EB-24V, 10pcs



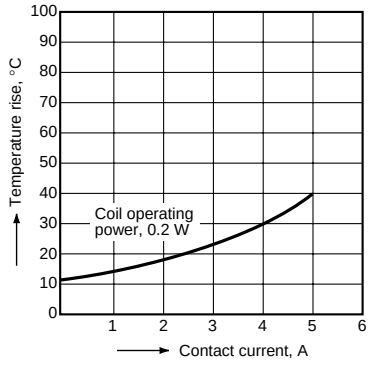
4.-(1) Coil temperature rise

Tested Sample: S4EB-24V, 4 Form A



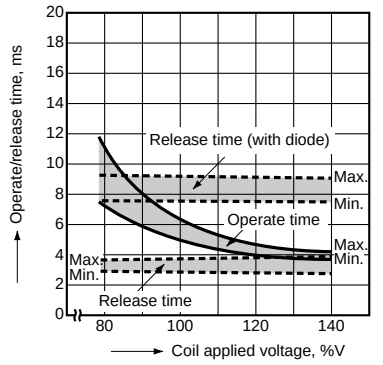
4.-(2) Coil temperature rise

Tested Sample: S4EB-24V, 4 Form A

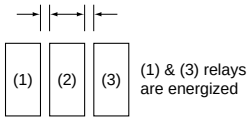


5. Operate and release time
(Single side stable type)

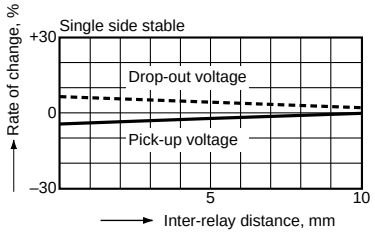
Tested Sample: S4EB-24V, 10pcs

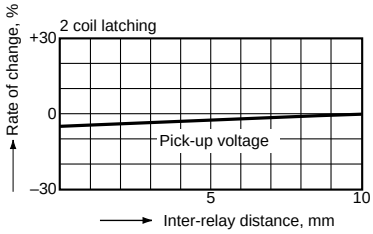


6. Influence of adjacent mounting

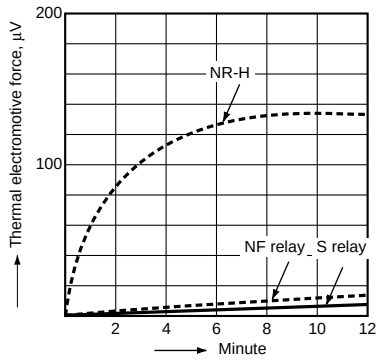


Note: When installing an S-relay near another, and there is no effect from an external magnetic field, be sure to leave at least 10 mm .394 inch between relays in order to achieve the performance listed in the catalog.





7. Thermal electromotive force



8. Effect from an external magnetic field