

2. Specifications

Characteristics	Item		Specifications
Contact	Initial contact pressure		2 Form C: Approx. 0.392 N (40 g 1.41 oz), 4 Form C: Approx. 0.196 N (20 g 0.71 oz)
	Arrangement		2 Form C, 4 Form C
	Contact resistance (Initial)		Max. 30 mΩ (By voltage drop 6 V DC 1A)
	Contact material		Stationary contact: Au flashed AgSnO ₂ type, Movable contact: AgSnO ₂ type
Rating	Nominal switching capacity (resistive load)		2 Form C: 15 A 250 V AC, 4 Form C: 10 A 250 V AC
	Max. switching power (resistive load)		2 Form C: 3,750 VA, 300 W, 4 Form C: 2,500 VA, 300 W
	Max. switching voltage		2 Form C, 4 Form C: 250 V AC, 30 V DC (48V DC: Max. 2A)
	Max. switching current		2 Form C: 15 A (AC) 10 A (DC), 4 Form C: 10 A
	Minimum operating power		150mW (Single side stable, 2 coil latching)
	Nominal operating power		300mW (Single side stable, 2 coil latching)
	Min. switching capacity (Reference value)*1		100 mA 5V DC
Electrical characteristics	Insulation resistance (Initial) (25°C, 50% relative humidity)		Min. 1,000MΩ (at 500V DC) Measurement at same location as "Breakdown voltage" section.
	Breakdown voltage (Initial)	Between open contacts	1,500 Vrms for 1 min. (Detection current: 10 mA)
		Between contact and coil	3,000 Vrms for 1 min. (Detection current: 10 mA)
		Between contact sets	3,000 Vrms for 1 min. (Detection current: 10 mA)
	Operate time [Set time] (at 20°C 68°F)		Max. 30 ms [Max. 30 ms] (Nominal coil voltage applied to the coil, excluding contact bounce time.)
	Release time [Reset time] (at 20°C 68°F)		Max. 20 ms [Max. 30 ms] (Nominal coil voltage applied to the coil, excluding contact bounce time.) (without diode)
	Temperature rise (coil) (at 20°C 68°F)		Max. 40°C (By resistive method, nominal voltage applied to the coil; nominal switching capacity.)
Mechanical characteristics	Shock resistance	Functional	Min. 392 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 3 mm (Detection time: 10μs.)
		Destructive	10 to 55 Hz at double amplitude of 3 mm
Expected life	Mechanical		Min. 5×10 ⁷ (at 180 times/min.)
	Electrical (resistive load)		2 Form C: Min. 10 ⁵ (15 A 250 V AC [at 20 times/min.]), Min. 10 ⁵ (10 A 30 V DC [at 20 times/min.]) 4 Form C: Min. 10 ⁵ (15 A 250 V AC [at 20 times/min.]), Min. 10 ⁵ (10 A 30 V DC [at 20 times/min.])
Conditions	Conditions for operation, transport and storage*2		Ambient temperature: -50°C to +60°C -58°F to +140°F; Humidity: 5 to 85% R.H. (Not freezing and condensing at low temperature)
	Max. operating speed		20 times/min. (at rated load)
Unit weight			2 Form C: 50 g 1.76 oz; 4 Form C: 65 g 2.29 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.

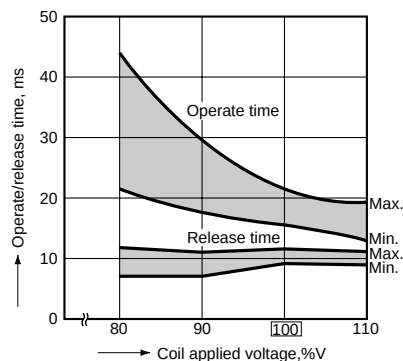
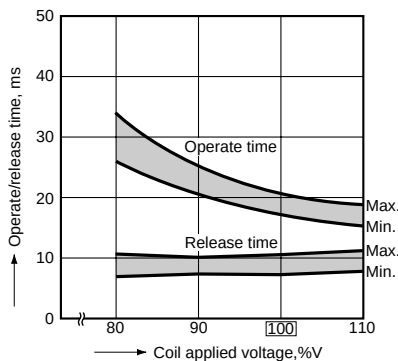
*2. The upper limit of the ambient temperature is the maximum temperature that can satisfy the coil temperature rise value. Refer to Usage, transport and storage conditions in NOTES.

REFERENCE DATA

Operate and release time (Single side stable)

SP2

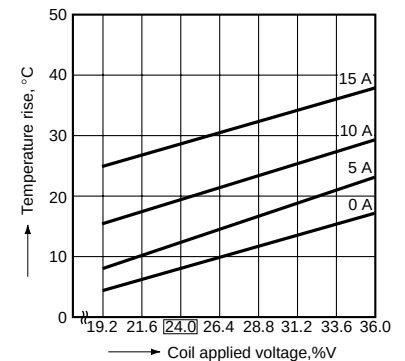
SP4



Coil temperature rise

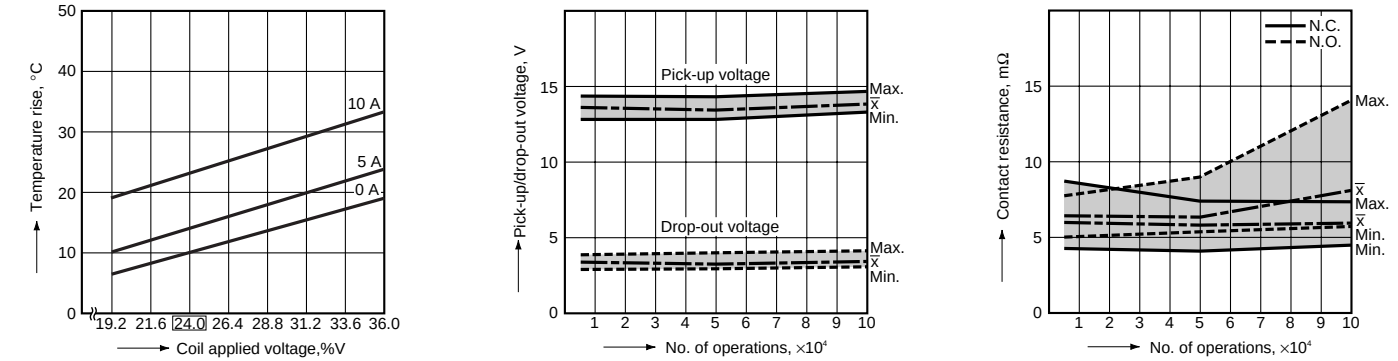
Tested sample: SP2-DC24V

Ambient temperature: 20 to 22°C 68 to 72°F

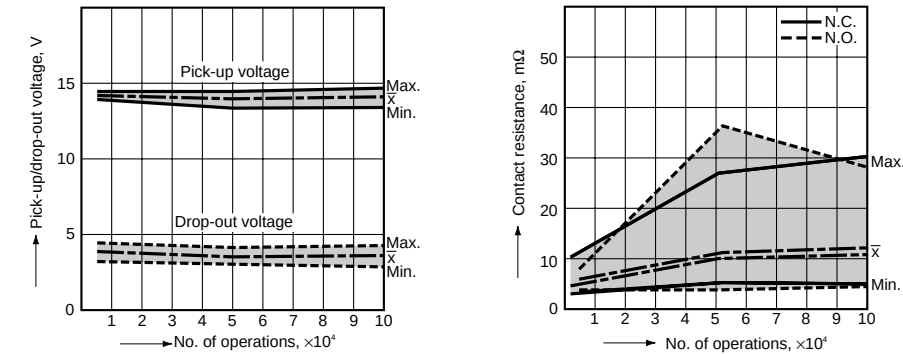


Tested sample: SP4-DC24V
Ambient temperature: 27 to 29°C 81 to 84°F

Electrical life
(SP2, 15 A 250 V AC resistive load)



Electrical life
(SP4, 10 A 250 V AC resistive load)



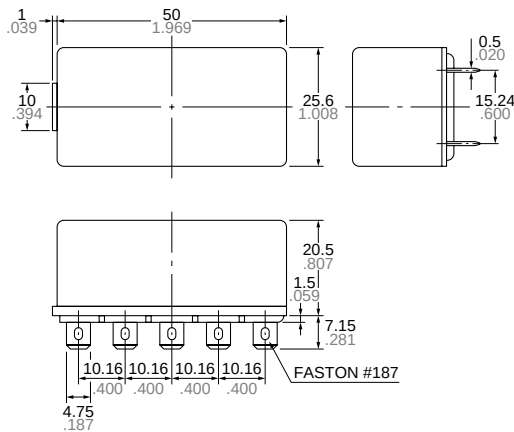
DIMENSIONS (mm inch)

The CAD data of the products with a **CAD Data** mark can be downloaded from: <http://industrial.panasonic.com/ac/e/>

2 Form C

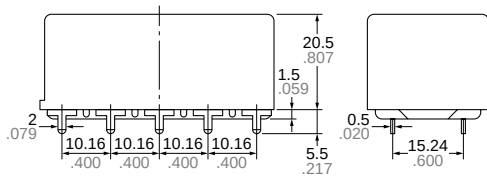
Plug-in terminal

CAD Data External dimensions

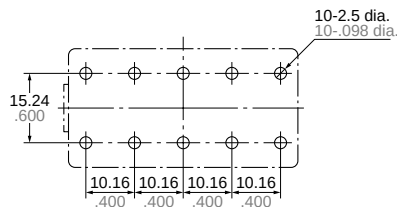


PC board type

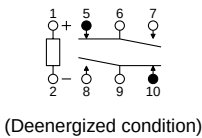
CAD Data External dimensions



PC board pattern (Bottom view)



Schematic (Bottom view)
Single side stable



2 coil latching

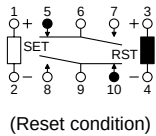


Diagram shows the "reset" position when terminals 3 and 4 are energized. Energize terminals 1 and 2 to transfer contacts.