

**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 <sub>2</sub> type, Movable contact: AgSnO <sub>2</sub> 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)	Between open contacts	Min. 1,000MΩ (at 500V DC) Measurement at same location as "Breakdown voltage" section.
		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
Destructive			Min. 980 m/s <sup>2</sup> (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 <sup>7</sup> (at 180 times/min.)	
	Electrical (resistive load)	2 Form C: Min. 10 <sup>5</sup> (15 A 250 V AC [at 20 times/min.]), Min. 10 <sup>5</sup> (10 A 30 V DC [at 20 times/min.]) 4 Form C: Min. 10 <sup>5</sup> (15 A 250 V AC [at 20 times/min.]), Min. 10 <sup>5</sup> (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.

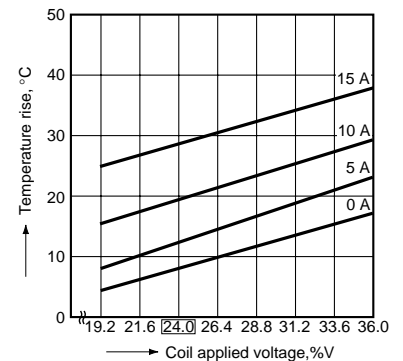
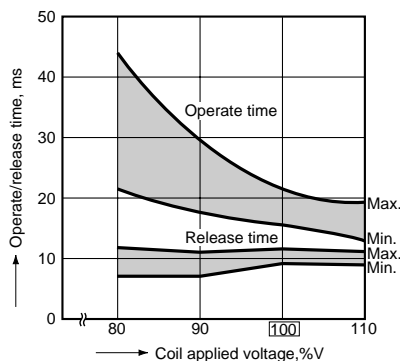
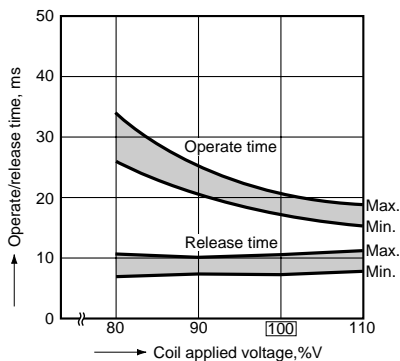
\*2. The upper limit of the ambient temperature is the maximum temperature that can satisfy the coil temperature rise value. Refer to Usage, transport and storage conditions in NOTES.

**REFERENCE DATA**

Operate and release time (Single side stable)  
SP2

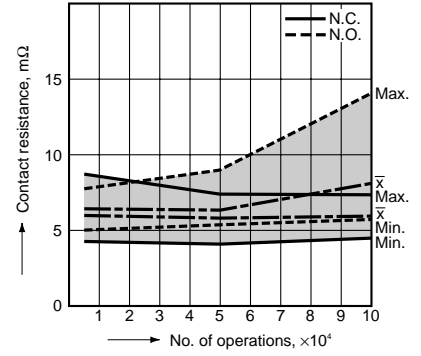
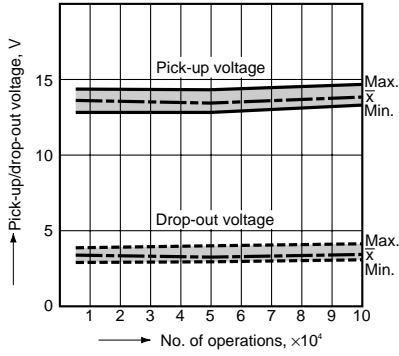
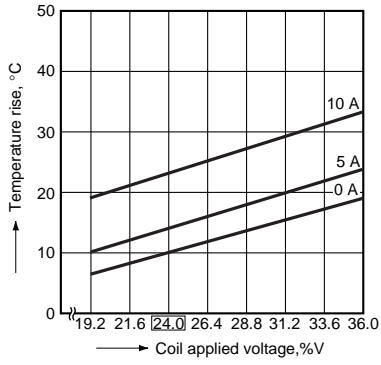
SP4

Coil temperature rise  
Tested sample: SP2-DC24V  
Ambient temperature: 20 to 22°C 68 to 72°F

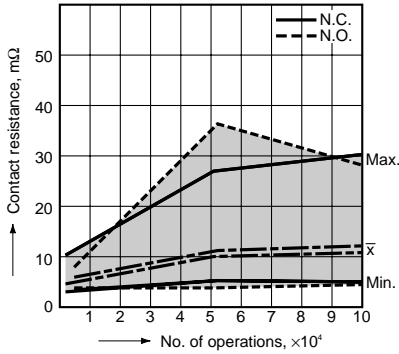
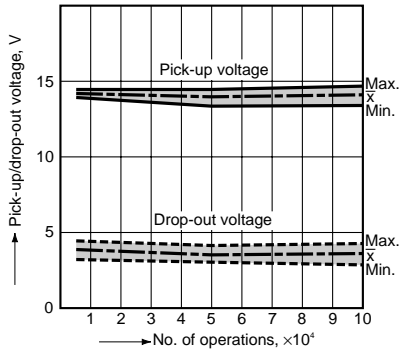


Tested sample: SP4-DC24V  
Ambient temperature: 27 to 29°C 81 to 84°F

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



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



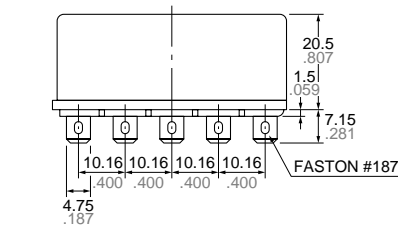
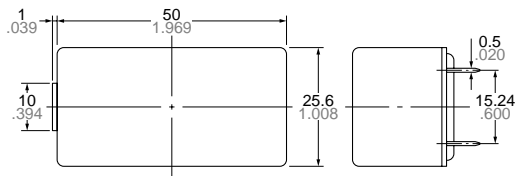
## DIMENSIONS (mm inch)

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

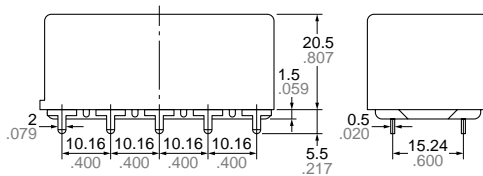
**CAD Data** External dimensions



General tolerance:  $\pm 0.3 \pm 0.12$

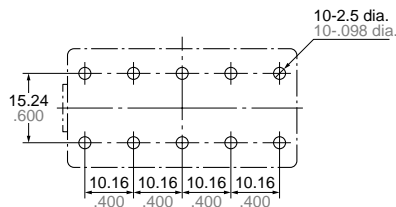
PC board type

**CAD Data** External dimensions



General tolerance:  $\pm 0.3 \pm 0.12$

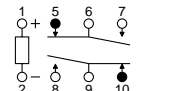
PC board pattern (Bottom view)



Tolerance:  $\pm 0.1 \pm 0.04$

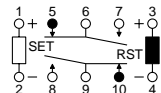
Schematic (Bottom view)

Single side stable



(Deenergized condition)

2 coil latching



(Reset condition)

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