

# POWER RELAY

## 1 POLE—8 A

### (MEDIUM LOAD CONTROL)

## JS SERIES

### ■ FEATURES

- UL, CSA, VDE, SEV, SEMKO, FIMKO, ÖVE, BSI recognized
- UL class B (130°C) insulation
- 1 form A (SPST-NO) or 1 form C (SPDT) contact
- Low profile and space saving—Height: 12.5 mm  
—Mounting space: 290 mm<sup>2</sup>
- High sensitivity in small package  
—Operating power ..... 0.11 to 0.14 W  
—Nominal power ..... 0.22 to 0.29 W
- High isolation in small package  
—Insulation distance : 8 mm  
—Dielectric strength : 5,000 VAC (between coil and contacts)  
—Surge strength : 10,000 V
- Plastic materials—UL 94 flame class V-0  
—UL CTI level class 2
- Plastic sealed type



### ■ ORDERING INFORMATION

[Example]     JS - 12 M E - K T - (V3)  
                   (a) (\*) (b) (c) (d)    (e) (f)    (j)

(a)	Series Name	JS : JS Series
(b)	Nominal Voltage	Refer to the COIL DATA CHART
(c)	Contact Arrangement	Nil : 1 form C (SPDT) M : 1 form A (SPST-NO)
(d)	Contact Material	Nil : Gold plate silver cadmium oxide E : Silver cadmium oxide N : Silver tin oxide gold overlay
(e)	Enclosure	K : Plastic sealed type
(f)	Construction	Nil: 3.2 mm T : 5.0 mm (only JS-MN)
(j)	For low current application	V3: For low current applications * not available with "E" contact material * not available with "T" construction

Note: Actual marking omits the hyphen (-) of (\*)

## ■ SAFETY STANDARD AND FILE NUMBERS

UL508, 873 (File No. E56140, E108658)

C22.2 No. 14 (File No. LR35579)

VDE 0435, 0631, 0700 (File No. 11039-4940-1010)

Nominal voltage	Contact rating
5 to 60 VDC	1/3 HP 125 VAC, 1/2 HP 250 VAC 10 A 30 VDC/250 VAC, resistive 3A 250 VAC inductive (PF = 0.4) Pilot duty B 300, C150, Q300

## ■ SPECIFICATIONS

Item		JS	
		Gold overlay silver alloy (standard) silver alloy	Gold overlay silver alloy (-V3)
Contact	Arrangement	1 form A (SPST-NO), 1 form C (SPDT)	
	Material	Gold plate silver cadmium oxide / cadmium oxide / silver tin oxide gold overlay	Gold overlay silver cadmium oxide / Gold overlay silver tin oxide
	Style	Single	
	Resistance (initial)	Maximum 30 mΩ	maximum 100 mΩ (at 1 A 6 VDC)
	Rating (resistive)	8 A 250 VAC or 8 A 24 VDC	
	Maximum Carrying Current	10 A	
	Maximum Switching Power	2,000 VA, 192 W	
	Maximum Switching Voltage	400VAC, 250 VDC	
	Maximum Switching Current	10 A	
	Minimum Switching Load*1	10 mA 5 VDC	100 mA 5 VDC
Coil	Nominal Power (at 20°C)	0.22 to 0.29 W	
	Operate Power (at 20°C)	0.11 to 0.14 W	
	Operating Temperature	-40°C to +85°C (no frost)	
Time Value	Operate (at nominal voltage)	Maximum 10 ms	
	Release (at nominal voltage)	Maximum 5 ms	
Insulation	Resistance (at 500 VDC)	Minimum 1,000 MΩ	
	Dielectric Strength	between open contacts	1,000 VAC 1 minute
		between coil and contacts	5,000 VAC 1 minute
	Surge Strength	10,000 V (at 1.2 × 50 μs)	
Life	Mechanical	2 × 10 <sup>7</sup> operations minimum	
	Electrical	1 × 10 <sup>5</sup> operations minimum (nominal load)	
Other	Vibration Resistance	Misoperation	10 to 55 Hz (double amplitude of 1.65 mm)
		Endurance	10 to 55 Hz (double amplitude of 3.3 mm)
	Shock Resistance	Misoperation	100 m/s <sup>2</sup> (11 ±1 ms)
		Endurance	1,000 m/s <sup>2</sup> (6 ±1 ms)
Weight	Approximately 8 g		

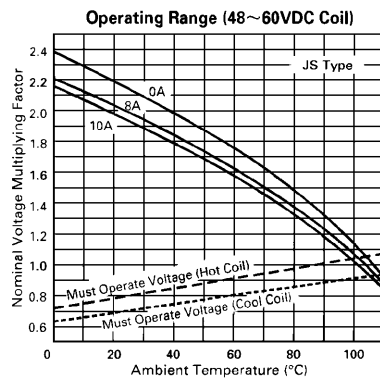
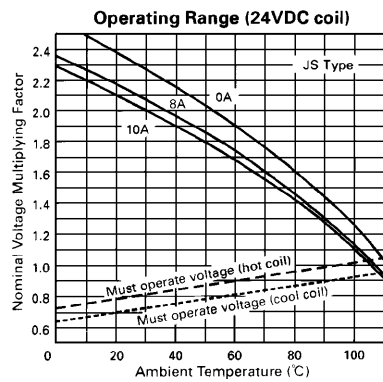
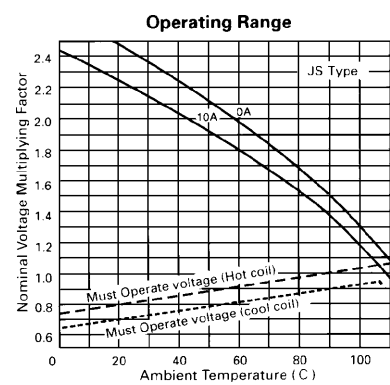
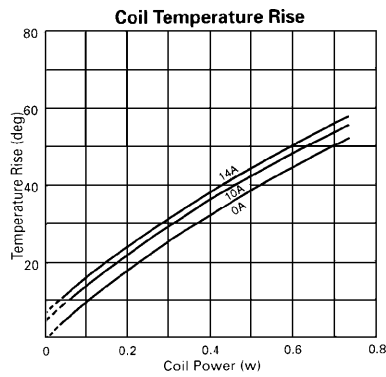
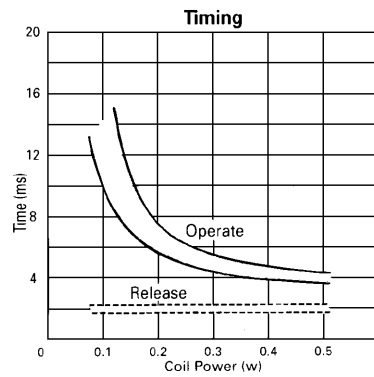
\*1 Minimum switching loads mentioned above are reference values. Please perform the confirmation test with the actual load before production since reference values may vary according to switching frequencies, environmental conditions and expected reliability levels.

## COIL DATA CHART

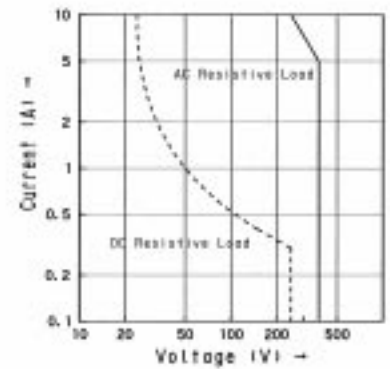
MODEL	Nominal voltage	Coil resistance ( $\pm 10\%$ )	Must operate voltage	Must release voltage	Nominal power
JS- 5 (M) (E, N) -K (T)	5 VDC	112 $\Omega$	3.5 VDC	0.5 VDC	225 mW
JS- 6 (M) (E, N) -K (T)	6 VDC	160 $\Omega$	4.2 VDC	0.6 VDC	225 mW
JS- 9 (M) (E, N) -K (T)	9 VDC	360 $\Omega$	6.3 VDC	0.9 VDC	225 mW
JS-12 (M) (E, N) -K (T)	12 VDC	660 $\Omega$	8.5 VDC	1.2 VDC	220 mW
JS-18 (M) (E, N) -K (T)	18 VDC	1,455 $\Omega$	12.7 VDC	1.8 VDC	225 mW
JS-24 (M) (E, N) -K (T)	24 VDC	2,350 $\Omega$	16.8 VDC	2.4 VDC	245 mW
JS-48 (M) (E, N) -K (T)	48 VDC	8,000 $\Omega$	33.4 VDC	4.8 VDC	290 mW
JS-60 (M) (E, N) -K (T)	60 VDC	12,500 $\Omega$	41.7 VDC	6.0 VDC	290 mW

Note : All values in the table are measured at 20°C.

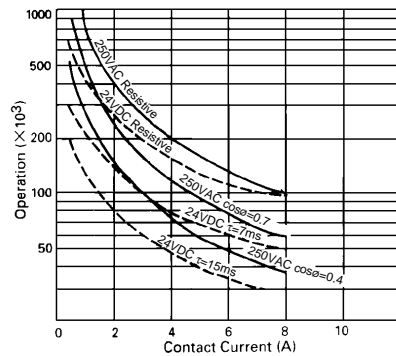
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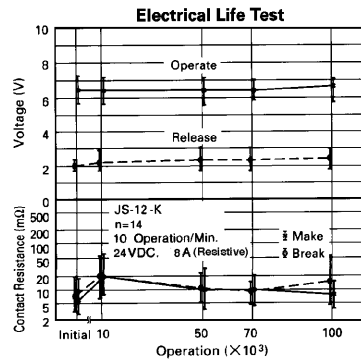
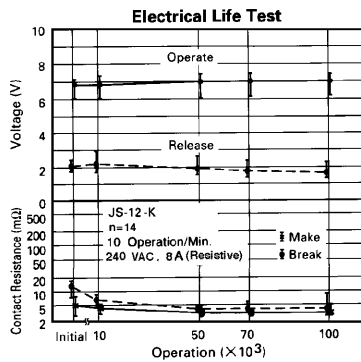
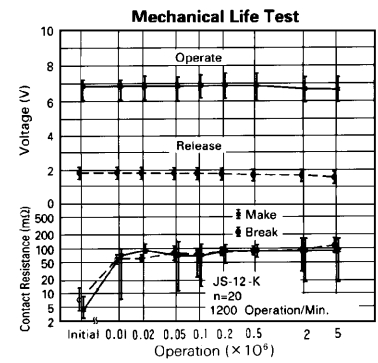
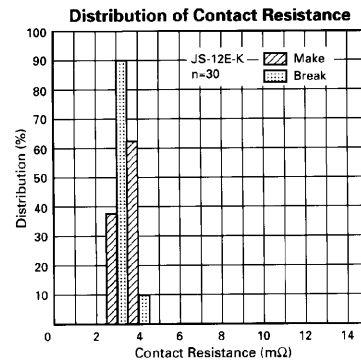
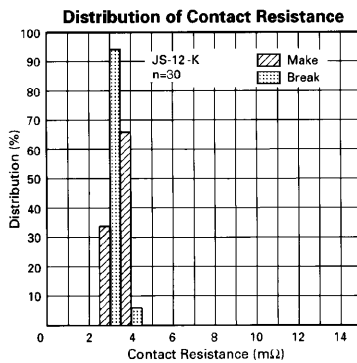
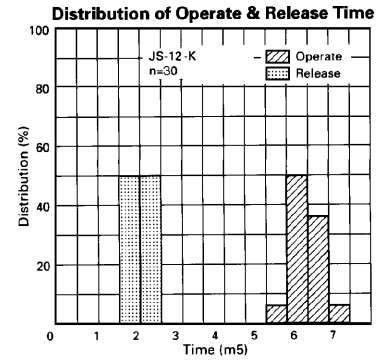
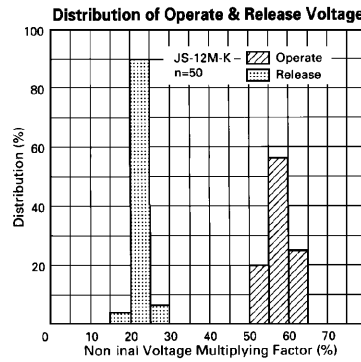
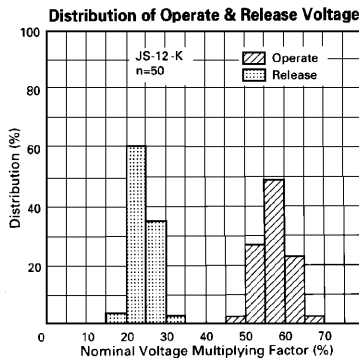
## Maximum Switching Power



## Life Curves



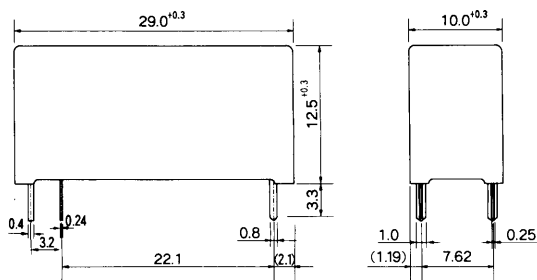
## REFERENCE DATA



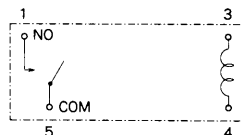
## ■ DIMENSIONS

### ● Dimensions

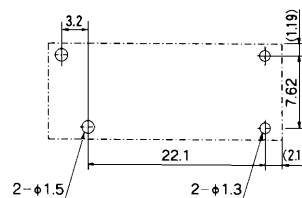
JS-MK type



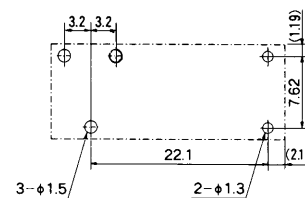
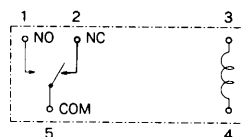
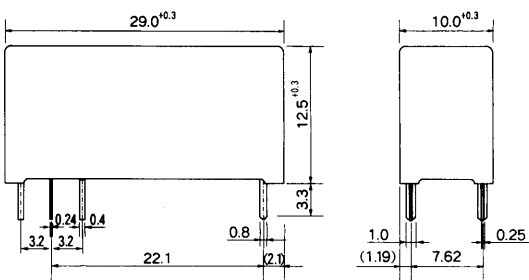
### ● Schematics (BOTTOM VIEW)



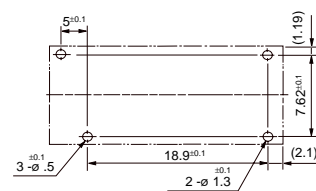
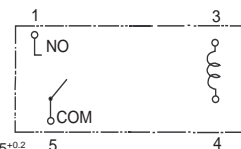
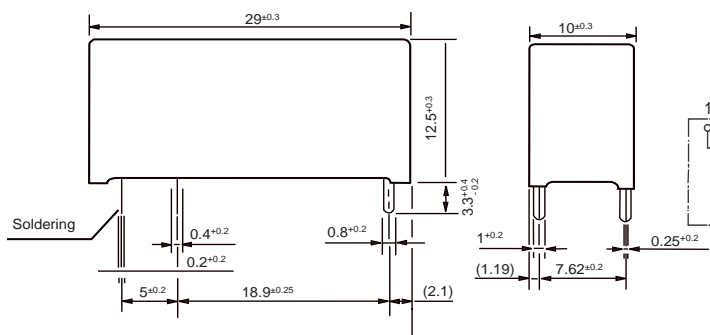
### ● PC board mounting hole layout (BOTTOM VIEW)



JS-K type



JS-MN-KT type



Unit: mm

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