

mm inch

### FEATURES

- **Small size**

The smallest double make type relay  
12.0(W)×15.5(L)×13.9(H) mm  
.472(W)×.610(L)×.547(H) inch

- **Standard terminal pitch employed**

The terminal array used is identical to that used in JJM relays(1c type).

- **Plastic sealed type**

Plastically sealed for automotive cleaning.

### SPECIFICATIONS

#### Contact

Arrangement	Double make contact	
Contact material	Silver alloy	
Initial contact resistance, max. (By voltage drop 6V DC 1A)	100 mΩ	
Contact voltage drop, max.	0.25V (at 2 × 6A)	
Rating	Nominal switching capacity	12A 14V DC (at 2 × 6A, lamp load)
	Max. switching current	2 × 6A (12V, at 20°C 68°F), 2 × 4A (12V, at 85°C 185°F)
Expected life (min. operations)	Mechanical (at 120cpm)	Min. 10 <sup>7</sup>
	Electrical (lamp load)	Min. 10 <sup>5</sup> *1

#### Coil

Nominal operating power	1,000 mW
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#### Remarks

- \* Specifications will vary with foreign standards certification ratings.
- \*1 At 12A 14V DC (lamp), operating frequency: 1s ON, 14s OFF
- \*2 Measurement at same location as "initial breakdown voltage" section.
- \*3 Detection current: 10mA
- \*4 Excluding contact bounce time.
- \*5 Half-wave pulse of sine wave: 11 ms; detection time: 10 μs
- \*6 Half-wave pulse of sine wave: 6 ms
- \*7 Detection time: 10 μs
- \*8 Time of vibration for each direction; X, Y direction: 2 hours Z direction: 4 hours



\*9 Refer to 5. Conditions for operation, transport and storage mentioned in AMBIENT ENVIRONMENT (Page 61)

#### Characteristics

Max. operating speed (at nominal switching capacity)	4 cpm	
Initial insulation resistance*2	Min. 100 MΩ (at 500 V DC)	
Initial breakdown voltage*3	Between open contacts	500 Vrms for 1min.
	Between contact and coil	500 Vrms for 1min.
Operate time*4 (at nominal voltage)(at 20°C 68°F)	Max. 10 ms (Initial)	
Release time (without diode)*4 (at nominal voltage)(at 20°C 68°F)	Max. 10 ms (Initial)	
Shock resistance	Functional*5	Min. 100 m/s <sup>2</sup> {10 G}
	Destructive*6	Min. 1,000 m/s <sup>2</sup> {100 G}
Vibration resistance	Functional*7	10 to 100 Hz, Min. 44.1 m/s <sup>2</sup> {4.5 G}
	Destructive*8	10 to 500 Hz, Min. 44.1 m/s <sup>2</sup> {4.5 G}
Conditions in case of operation, transport and storage*9 (Not freezing and condensing at low temperature)	Ambient temp.	-40 to +85°C -40 to +185°F
	Humidity	5 to 85% R.H.
Unit weight	Approx. 5 g .176 oz	

### TYPICAL APPLICATIONS

Car alarm system flashing lamp etc.

### ORDERING INFORMATION

Ex. JJM	2w	12V
Contact arrangement		Coil voltage (DC)
Double make contact		12V

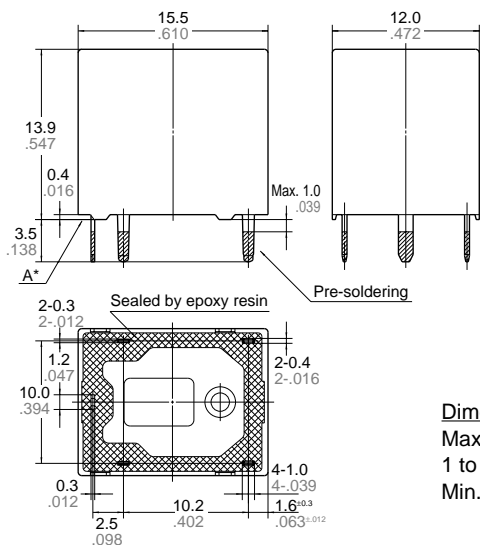
Standard packing: Carton(tube package) 50pcs. Case: 1,000pcs.

### TYPES AND COIL DATA (at 20°C 68°F)

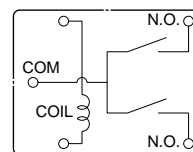
- **Single side stable type**

Part No.	Nominal voltage, V DC	Pick-up voltage, V DC (max.)	Drop-out voltage, V DC (min.)	Coil resistance Ω (±10%)	Nominal operating current, mA (±10%)	Nominal operating power, mW	Usable voltage range, V DC
JJM2w-12V	12	(initial) 6.9	(initial) 1.0	144	83.3	1,000	10 to 16

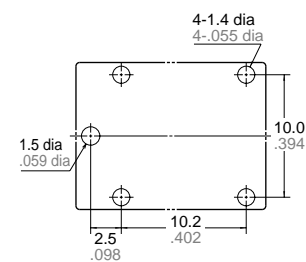
## DIMENSIONS



Schematic (Bottom view)



PC board pattern (Bottom view)

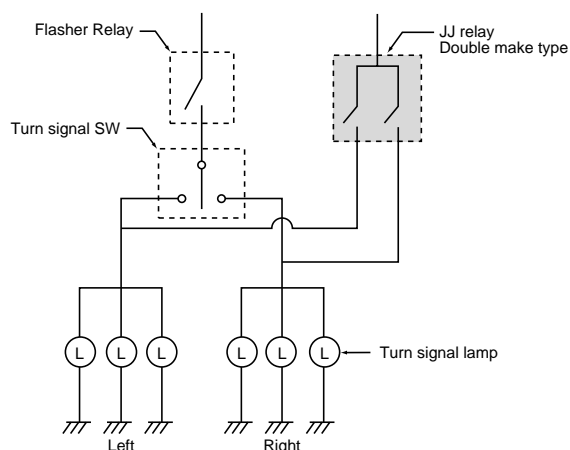


Tolerance:  $\pm 0.1 \pm 0.004$

<b>Dimension:</b>	<b>General tolerance</b>
Max. 1mm .039 inch:	$\pm 0.1 \pm 0.004$
1 to 3mm .039 to .118 inch:	$\pm 0.2 \pm 0.008$
Min. 3mm .118 inch:	$\pm 0.3 \pm 0.012$

\* Dimensions (thickness and width) of terminal in this catalog is measured before pre-soldering. Intervals between terminals is measured at A surface level.

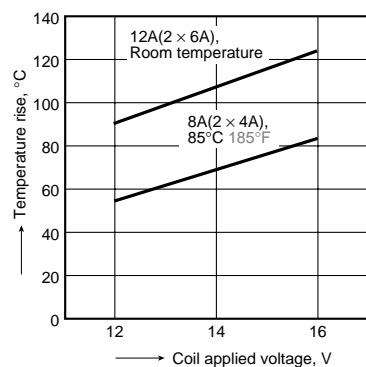
## EXAMPLE OF CIRCUIT



## REFERENCE DATA

### 1. Coil temperature rise

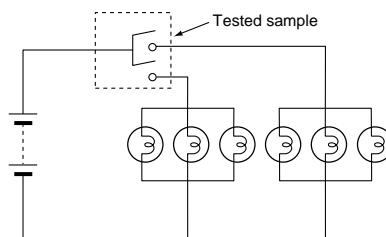
Tested samples: JJM2w-12V, 6pcs  
 Point measured: Inside the coil  
 Contact carrying current: 2 × 6A, 2 × 4A  
 Ambient temperature: Room temperature, 85°C  
 185°F



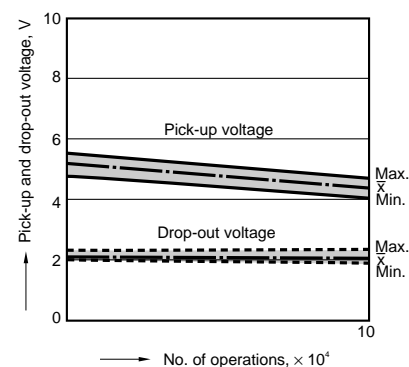
### 2. Electrical life test (Lamp load)

Tested samples: JJM2w-12V, 6pcs  
 Load: 5.5A, inrush 48A, 6 × 21W  
 Operating frequency: ON 1s, OFF 14s

Circuit:



Contact welding: 0 time  
 Miscontact: 0 time



**For Cautions for use, see Relay Technical Information (Page 48 to 76).**