

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 ⁷
	Electrical (lamp load)	Min. 10 ⁵ *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 ² {10 G}
	Destructive*6	Min. 1,000 m/s ² {100 G}
Vibration resistance	Functional*7	10 to 100 Hz, Min. 44.1 m/s ² {4.5 G}
	Destructive*8	10 to 500 Hz, Min. 44.1 m/s ² {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

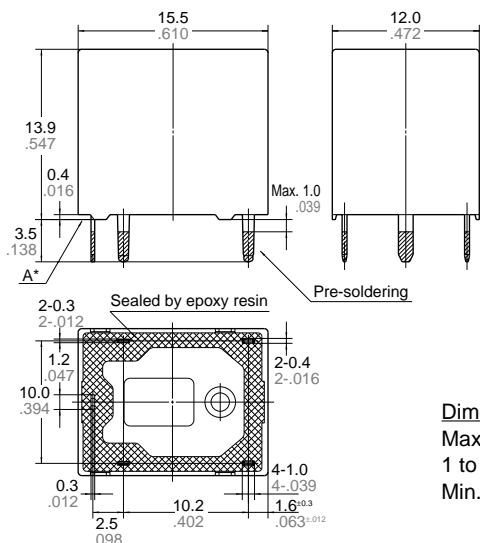
Standard packing: Carton(tube package) 50pcs. Case: 1,000pcs.

TYPES AND COIL DATA (at 20°C 68°F)

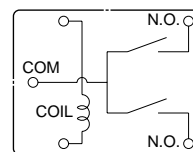
- **Single side stable type**

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

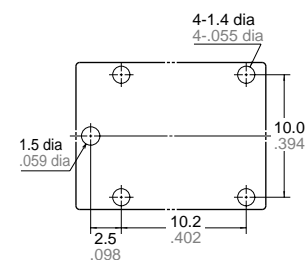
DIMENSIONS



Schematic (Bottom view)



PC board pattern (Bottom view)

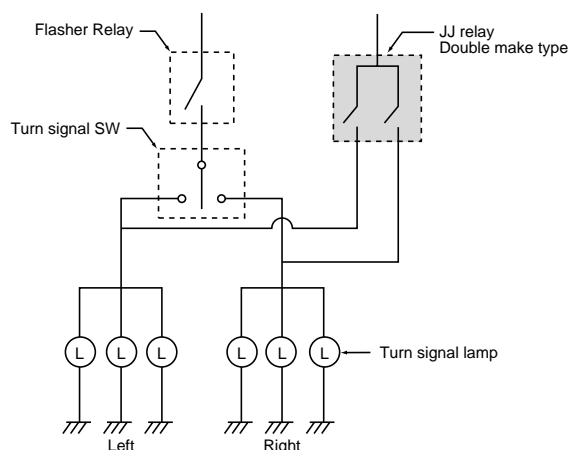


Tolerance: $\pm 0.1 \pm 0.004$

Dimension:	General tolerance
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.

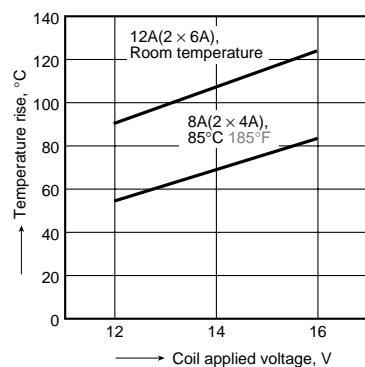
EXAMPLE OF CIRCUIT



REFERENCE DATA

1. Coil temperature rise

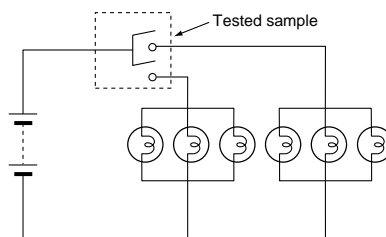
Tested samples: JJM2w-12V, 6pcs
 Point measured: Inside the coil
 Contact carrying current: 2 × 6A, 2 × 4A
 Ambient temperature: Room temperature, 85°C
 185°F



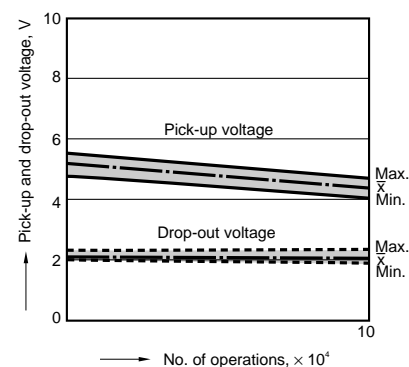
2. Electrical life test (Lamp load)

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).