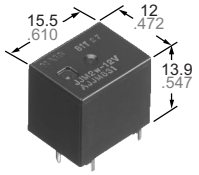
NAiS

DOUBLE MAKE CONTACT AUTOMOTIVE RELAY

JJM-RELAYS (Double make type)



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

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/s² {10 G}
	Destructive*6	Min. 1,000 m/s² {100 G}
Vibration resistance	Functional*7	10 to 100 Hz, Min. 44.1 m/s² {4.5 G}
	Destructive*8	10 to 500 Hz, Min. 44.1 m/s² {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 valtage (DC)
Double make contact	12V

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

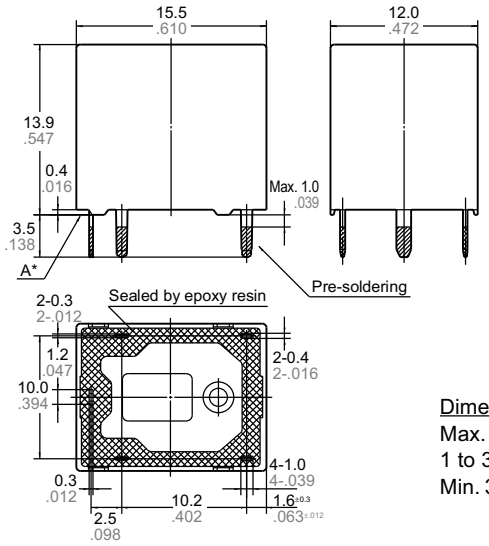
TYPES AND COIL DATA (at 20°C 68°F)

• Single side stable type

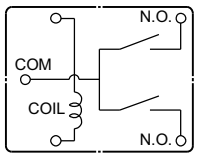
Part No.	Nominal voltage, V DC	Pick-up voltage, V DC (max.)	Drop-out voltage, V DC (min.)	Coil resistance Ω (±10%)	Nominal operating current, mA (±10%)	Nominal operating power, mW	Usable voltage range, V DC
JJM2w-12V	12	(initial) 6.9	(initial) 1.0	144	83.3	1,000	10 to 16

DIMENSIONS

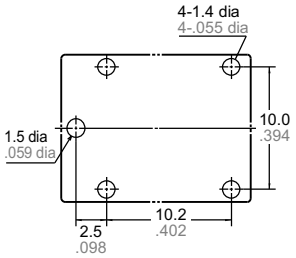
mm inch



Schematic (Bottom view)



PC board pattern (Bottom view)

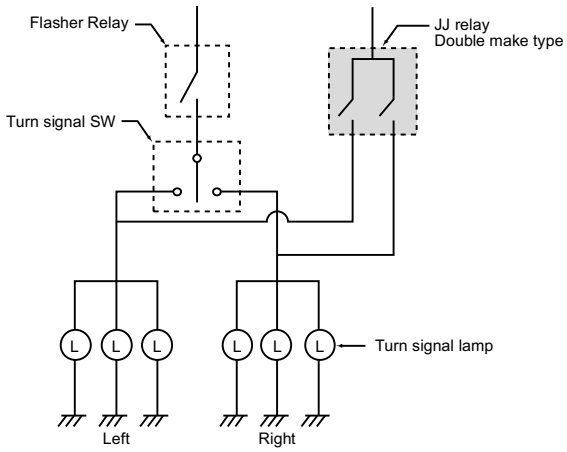


Tolerance: ±0.1 ±.004

Dimension:	General tolerance
Max. 1mm .039 inch:	±0.1 ±.004
1 to 3mm .039 to .118 inch:	±0.2 ±.008
Min. 3mm .118 inch:	±0.3 ±.012

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

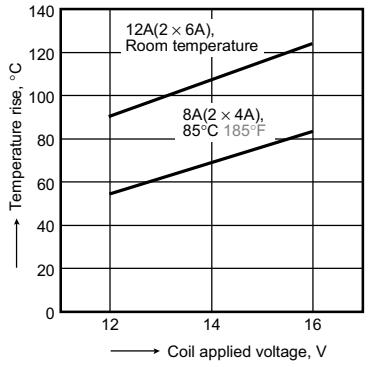
EXAMPLE OF CIRCUIT



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

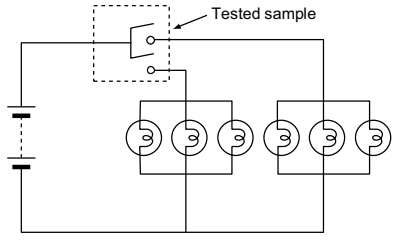


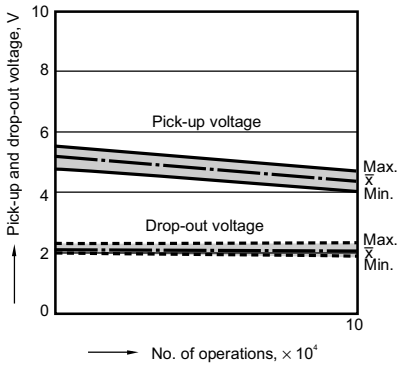
2. Electrical life test (Lamp load)

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

Contact welding: 0 time
Miscontact: 0 time

Circuit:





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

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