

COMPACT ECONOMICAL POWER RELAYS





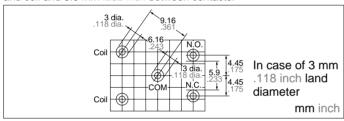
mm inch

UL File No.: E43028 CSA File No.: LR26550

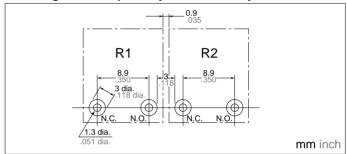
- Compact size Height Max. 18.7 mm .736 inch lower than JY relay (22.5 mm) (.886 inch)
- High contact capacity 5A 125 V AC
- Safety-oriented between coil and contact terminals
- All plastic materials: UL flame retardance 94V-0

TERMINAL LAYOUT

Distance of 9.16 mm .360 inch between common and coil terminals and 8.9 mm .350 inch between contacts give room to the land diameter width when the relay is mounted on PC board, and allow design of patterns with insulation distances of 6 mm .236 inch between common and coil and 5.9 mm .232 inch between contacts.



3 mm .118 inch or more insulation distance for close mounting can be kept easily with JE-X relays.



SPECIFICATIONS

Contact

1 Form A	1 Form C		
100 mΩ			
Silver alloy			
5 A 30 V DC, 5 A 125 V AC, 3A 250 V A			
750 VA, 150 W			
250 V AC, 30 V DC			
3A (AC) 5 A (DC)			
3 A, 1/10 HP 277 V AC 5 A, 1/10 HP 125 V AC 5 A 30 V DC			
5 A 125 V ~ (cosφ = 0.4)			
5×10 ⁶			
10⁵			
256 mW (196 mW	/ for JE1aXN, JE1XN)		
	100 Silver 5 A 30 V DC, 5 A 125 750 VA 250 V AC 3A (AC) 3 A, 1/10 H 5 A, 1/10 H 5 A 30 V D 5 A 125 V ~		

Remarks

- *1 Measurement at same location as "Initial breakdown voltage" section
- *2 Detection current: 10 mA
- *3 Wave is standard shock voltage of $\pm 1.2 \times 50 \mu s$ according to JEC-212-1981 *4 Excluding contact bounce time
- *5 Half-wave pulse of sine wave: 6ms; detection time: 10μs
- *6 Half-wave pulse of sine wave: 6ms
- *7 Detection time: 10μs
- *8 Refer to 5. Conditions for operation, transport and storage mentioned in AMBIENT ENVIRONMENT (Page 49)

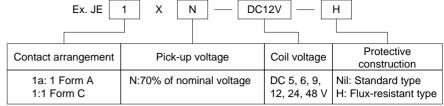
Characteristics (at 25°C 77°F)

Max. operating speed				20 cpm (at 70°C)		
Initial insulation resistance*1				Min. 100 MΩ (at 500 V DC)		
Initial breakdown	Between open contacts			750 Vrms		
voltage*2	Between contacts and coil			1,500 Vrms		
Surge voltage between coil and contact*3			Min. 5,000 V			
Operate time*4 (at nominal voltage)				Approx. 10 ms		
Release time(without diode)*4 (at nominal voltage)			Approx. 2 ms			
Temperature rise (at 70°C)				Max. 45°C with nominal coil voltage and at nominal switching capacity		
Shock resistance		nctional*5	Min. 98 m/s ² {10 G}			
		Destructive*6		Min. 980 m/s ² {100 G}		
Vibration resistance —		Functional*7		98 m/s² {10 G}, 10 to 55 Hz at double amplitude of 1.6 mm		
		Destructive		117.6 m/s ² {12 G}, 10 to 55 Hz at double amplitude of 2.0 mm		
Conditions for operation, transport and storage*8 (Not freezing and condens- ing at low temperature)		Ambient temp.	−40°C to +70°C −40°F to +158°F			
		Humidity	5 to 85% R.H.			
Unit weight			Approx. 9.2g .32 oz			

TYPICAL APPLICATIONS

- Home appliances
 Oven, range, dryer, heater,
 Air conditioner etc.
- Automotive
- Garage door opener
- Personal computer
- Programmable controller

TYPICAL APPLICATIONS



(Note) Standard packing: Carton 100 pcs. Case 500 pcs.

TYPES

Contact arrangement	Coil voltage	Pick-up 70% V type			
Contact arrangement	Coil voltage	Standard type	Flux-resistant type		
1 Form A	5 V DC	JE1aXN-DC5V	JE1aXN-DC5V-H		
	6 V DC	JE1aXN-DC6V	JE1aXN-DC6V-H		
	9 V DC	JE1aXN-DC9V	JE1aXN-DC9V-H		
	12 V DC	JE1aXN-DC12V	JE1aXN-DC12V-H		
	24 V DC	JE1aXN-DC24V	JE1aXN-DC24V-H		
	48 V DC	JE1aXN-DC48V	JE1aXN-DC48V-H		
	5 V DC	JE1XN-DC5V	JE1XN-DC5V-H		
	6 V DC	JE1XN-DC6V	JE1XN-DC6V-H		
1 Form C	9 V DC	JE1XN-DC9V	JE1XN-DC9V-H		
	12 V DC	JE1XN-DC12V	JE1XN-DC12V-H		
	24 V DC	JE1XN-DC24V	JE1XN-DC24V-H		
	48 V DC	JE1XN-DC48V	JE1XN-DC48V-H		

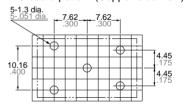
COIL DATA at 20°C 68°F

Nominal voltage, V DC	Pick-up voltage, V DC (max.)	Drop-out voltage, V DC (min.)	Nominal operating currrent, mA (±10%)	Coil resistance, W (±10%)	Nominal operating power, mW	Maximum allowable voltage, V DC (at 70°C)
5	3.5	0.5	80	62.5	400	6.5
6	4.2	0.6	67	90	400	7.8
9	6.3	0.9	44	202	400	11.7
12	8.4	1.2	33	360	400	15.6
24	16.8	2.4	17	1,440	400	31.2
48	33.6	4.8	8.3	5,760	400	62.4

DIMENSIONS

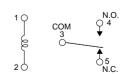


mm inch
PC board pattern (Copper-side view)



Tolerance: ±0.1 ±.004

Schematic (BOTTOM VIEW)



Note: The above shows 1 form C type, and No. 5 terminal is eliminated on the 1 form A type.

 Dimension
 General tolerance

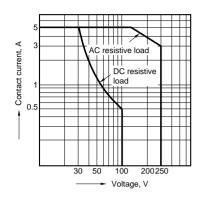
 Max. 1mm .039 inch
 ±0.1 ±.004

 1 to 3mm .039 to .118 inch
 ±0.2 ±.008

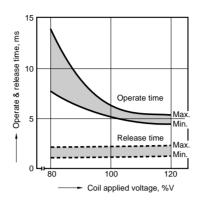
 Min. 3mm .118 inch
 ±0.3 ±.012

REFERENCE DATA

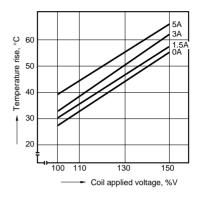
1. Max. switching power



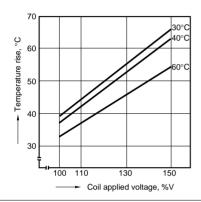
2. Operate and release time



3. Coil temperature rise (at 30°C 86°F)



4. Coil temperature rise (Contact carrying current: 5 A)



NOTE

Soldering should be carried out within 3 s to 350°C 662°F or within 5 s at 250°C 482°F.