Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

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Email & Skype: info@chipsmall.com Web: www.chipsmall.com
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

Ideal for heater control
1 Form A 16A, 10.9 mm .429 inch height flat power relays

JV-N RELAYS

RoHS compliant

Protective construction: Flux-resistant type

FEATURES

1. **High capacity**
   The contacts are high capacity 16A, 125 V AC.
2. **Compact, flat type with low 10.9 mm .429 inch height**
   Compact flat type with low surface area of 16 × 22 mm .630 × .866 inch and height of 10.9 mm .429 inch.
3. **High sensitivity at 200 mW**
   High sensitivity at 200 mW coil power consumption.
4. **Represses contact terminal heat**
   The contact terminals are large and thick. This limits the rise in temperature of the terminals when there is a large current flowing to approx. 28°C 62°F (normal current of 16 A).
5. **Conforms to the various safety standards**
   UL, CSA, TÜV approved.

TYPICAL APPLICATIONS

- **Home appliances**
  Iron, Electric carpet, Washing machine, Water heater

ORDERING INFORMATION

JVN [1a] [F] - [ ] - [F]

Contact arrangement
1a: 1 Form A

Protective construction
F: Flux-resistant type

Nominal coil voltage (DC)
4.5V, 6V, 9V, 12V, 18V, 24V, 48V, 100V

Contact material
F: $AgSnO_2$ type

Note: Certified by UL, CSA and TÜV

TYPES

Nominal coil voltage	Part No.
4.5V DC	JVN1aF-4.5V-F
6V DC	JVN1aF-6V-F
9V DC	JVN1aF-9V-F
12V DC	JVN1aF-12V-F
18V DC	JVN1aF-18V-F
24V DC	JVN1aF-24V-F
48V DC	JVN1aF-48V-F
100V DC	JVN1aF-100V-F

Note: Standard packing; Carton: 100 pcs., Case: 500 pcs.
5V type is also available. Please consult us.

RATING

1. Coil data

Nominal coil voltage	Pick-up voltage (at 20°C 68°F)	Drop-out voltage (at 20°C 68°F)	Nominal operating current [±10%] (at 20°C 68°F)	Coil resistance [±10%] (at 20°C 68°F)	Nominal operating power	Max. applied voltage (at 20°C 68°F)
4.5V DC	75%V or less of nominal voltage	5%V or more of nominal voltage	44.4mA	101Ω	200mW	150%V of nominal voltage
6V DC			33.3mA	180Ω		
9V DC			22.2mA	405Ω		
12V DC			16.7mA	720Ω		
18V DC			11.1mA	1,620Ω		
24V DC			8.3mA	2,880Ω		
48V DC			4.2mA	11,520Ω		
100V DC	Max. 60 VDC	Min. 4 VDC	6 mA	16,600Ω	600mW	110%V

2. Specifications

Characteristics	Item		Specifications
Contact	Arrangement		1 Form A
	Contact resistance (Initial)		Max. 100 mΩ (By voltage drop 6 V DC 1A)
	Contact material		$AgSnO_2$ type
Rating	Nominal switching capacity (resistive load)		16A 125V AC, 10A 277V AC, 10A 30V DC
	Max. switching power (resistive load)		2,770VA, 300W
	Max. switching voltage		277V AC, 110V DC (0.3A)
	Max. switching current		16A (125V AC), 10A (DC)
	Nominal operating power		200mW (4.5 to 48V DC), 600mW (100V DC)
	Min. switching capacity (reference value)*1		100mA, 5V DC
Electrical characteristics	Insulation resistance (Initial)		Min. 1,000MΩ (at 500V DC) Measurement at same location as “Breakdown voltage” section.
	Breakdown voltage (Initial)	Between open contacts	1,000 Vrms for 1 min. (Detection current: 10 mA)
		Between contact and coil	2,500 Vrms for 1 min. (Detection current: 10 mA)
	Surge breakdown voltage*2 (Between contact and coil) (Initial)		4,500 V
	Operate time (at nominal voltage) (at 20°C 68°F) (Initial)		Max. 12 ms (4.5 to 48V DC), Max. 8 ms (100V DC) (excluding contact bounce time.)
	Release time (at nominal voltage) (at 20°C 68°F) (Initial)		Max. 5 ms (excluding contact bounce time) (Without diode)
Mechanical characteristics	Shock resistance	Functional	200 m/s^2 (Half-wave pulse of sine wave: 11 ms; detection time: 10μs.)
		Destructive	1,000 m/s^2 (Half-wave pulse of sine wave: 6 ms.)
	Vibration resistance	Functional	10 to 55 Hz at double amplitude of 1.6 mm (Detection time: 10μs.)
		Destructive	10 to 55 Hz at double amplitude of 2.0 mm
Expected life	Mechanical (at 180 times/min.)		Min. 2×10^7
	Electrical (at 20 times/min.)		Min. 3×10^4 (16A 125V AC), Min. 5×10^4 (10A 277V AC), Min. 10^5 (10A 30V DC), Min. 10^5 (10A 125V AC)
Conditions	Conditions for operation, transport and storage*3		Ambient temperature: –40°C to +70°C –40°F to +158°F (4.5 to 48V DC), –40°C to +60°C –40°F to +140°F (100V DC), Humidity: 5 to 85% R.H. (Not freezing and condensing at low temperature), Air pressure: 86 to 106kPa
	Max. operating speed		20 times/min. (at nominal switching capacity)
Unit weight			Approx. 8 g .28 oz

* Specifications will vary with foreign standards certification ratings.

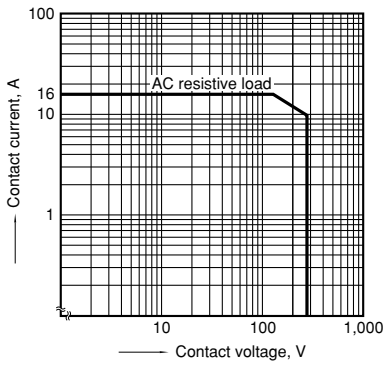
Notes: *1. This value can change due to the switching frequency, environmental conditions, and desired reliability level, therefore it is recommended to check this with the actual load.

*2. Wave is standard shock voltage of ±1.2×50μs according to JEC-212-1981

*3. The upper limit of the ambient temperature is the maximum temperature that can satisfy the coil temperature rise value. Refer to Usage, transport and storage conditions in NOTES.

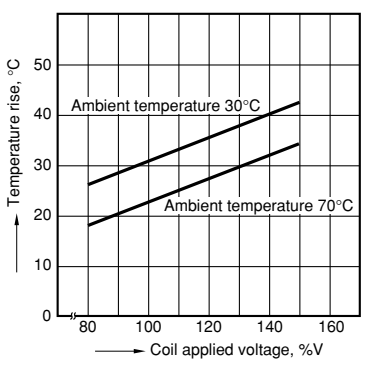
REFERENCE DATA

1. Max. switching power



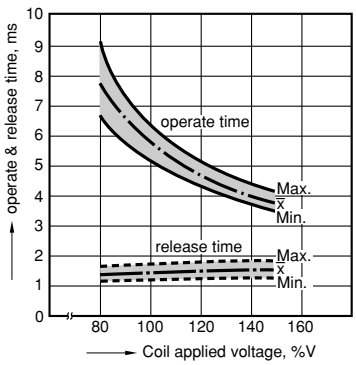
2. Coil temperature rise

Sample: JVN1aF-12 V-F, 6 pcs.
point measured: coil inside
Contact current: 16 A

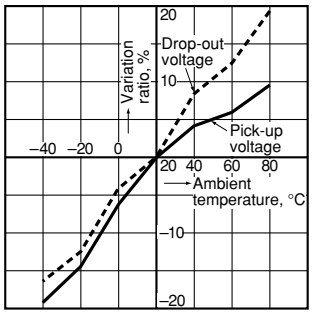


3. Operate/release time

Sample: JVN1aF-12 V-F, 6 pcs.



4. Ambient temperature characteristics
Sample: JVN1aF-12 V-F, 6 pcs.

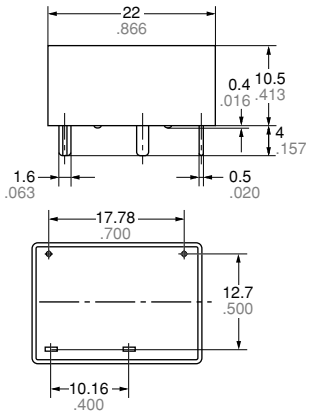


DIMENSIONS (mm inch)

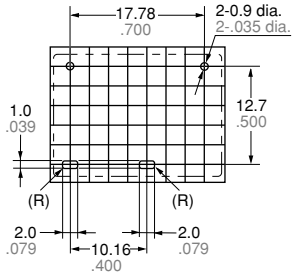
The CAD data of the products with a **CAD Data** mark can be downloaded from: http://industrial.panasonic.com/ac/e/

CAD Data

External dimensions



PC board pattern



Dimension:	General tolerance
Less than 1mm .039inch:	±0.2 ±.008
Min. 1mm .039inch less than 5mm .197 inch:	±0.3 ±.012
Min. 5mm .197 inch:	±0.4 ±.016

SAFETY STANDARDS

UL (Recognized)		CSA (Certified)		TÜV (Certified)	
File No.	Contact rating	File No.	Contact rating	File No.	Contact rating
E43028	16A 277V AC General Use	LR26550	16A 277V AC	B 12 09 13461 334	16A 250V AC (cosϕ=0.4)
	16A 125V AC General Use		16A 125V AC		10A 30V DC (0ms)
	10A 30V DC Resistive		10A 30V DC		—
	0.3A 110V DC Resistive		0.3A 110V DC		—
	1/10HP 277V AC		1/10HP 277V AC		—
	1/10HP 125V AC		1/10HP 125V AC		—

NOTES

1. For cautions for use, please read "GENERAL APPLICATION GUIDELINES".

Please contact .....

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