

COMPACT FLAT POWER RELAY FOR HEATER LOADS

JV-N RELAYS



FEATURES

• High 16 A capacity

The contacts are high capacity 16A, 125 V AC.

• Compact, flat type with low 10.9 mm .429 inch height

Compact flat type with low surface area of $16 \times 22 \text{ mm} .630 \times .866 \text{ inch and height of}$ 10.9 mm .429 inch.

• High sensitivity at 200 mW High sensitivity at 200 mW coil power consumption.

• Represses contact terminal heat

The contact terminals are larger and thicker compared to the existing JV relay. 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).

• Conforms to the various safety standards

UL/CSA, TÜV approved.

SPECIFICATIONS

Contact

Arrangement		1 Form A				
Initial contact resistance, max. (By voltage drop 6 V DC 1 A)		Max. 30 mΩ				
Contact mate	erial	Silver alloy				
Rating (resistive load)	Nominal switching capacity	16 A 125 V AC, 10 A 277 V AC 10 A 30 V DC, 10 A 125 V AC				
	Max. switching power	2,770 VA, 300 W				
	Max. switching voltage	277 V AC, 30 V DC				
	Max. switching current	16 A (AC 125 V), 10 A (DC)				
Expected life (min. ope.) Mechanical (at 180 cpm)		2×10 ⁷				
Electrical at resistive load (at 20 cpm)	Sealed type 16 A 125 V AC, 10 A 30 V DC	10⁵				
	Flux-resistant type 10 A 125 V AC	3×10⁵				

Coil

	200 mW (DC 4.5 to 48 V) 600 mW (DC 100 V)
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Remarks

- Specifications will vary with foreign standards certification ratings.
- *1 Excluding contact bounce time *2 Excluding contact bounce time, without diode
- *3 By resistive method; nominal voltage applied to the coil; contact carrying current: 16A, at 70°C 158°F
- *4 Nominal voltage applied to the coil, at 60°C 140°F
- *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 Refer to 5. Conditions for operation, transport and storage mentioned in AMBIENT ENVIRONMENT (Page 61).

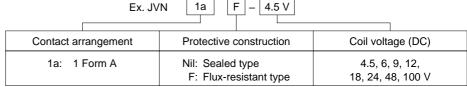
Characteristics

Max. operating spo	eed	20 cpm			
Operate time*1 (at	nominal voltage)	Max. 12 ms (DC 4.5 V to 48 V) Max. 8 ms (DC 100 V)			
Release time*2 (at	nominal voltage)	Max. 5 ms			
Initial insulation re	sistance	Min. 1,000 MΩ (at 500 V DC)			
Initial breakdown voltage	Between open contacts	1,000 Vrms for 1 min.			
(Detection current: 10 mA	Between contacts and coil	2,500 Vrms for 1 min.			
Surge voltage bety coil	ween contact and	Min. 4,500 V			
Temperature rise		Max. 45°C (DC 4.5 V to 48 V) *3 Max. 55°C (DC 100 V)*4			
Conditions in case transport and store		Ambient temperature -40 to 70°C -40 to 158°F (DC 4.5 to 48 V) -40 to 60°C -40 to 140°F (DC 100V) Humidity: 5 to 85 % R.H. (Note freezing and condensing at low temperature) Air pressure: 86 to 106 kPa			
Shock resistance	Functional	Min. 200 m/s ² {20G}* ⁵			
	Destructive	Min. 1,000 m/s ² {100G}* ⁶			
Vibration resistance	Functional	10 to 55 Hz *7 at double amplitude of 1.6 mm			
	Destructive	10 to 55 Hz at double amplitude of 2 mm			
Unit weight		Approx. 8g .28 oz			

TYPICAL APPLICATIONS

- AV equipment: TV's, VTR's, etc.
- OA equipment
- HA equipment

ORDERING INFORMATIONS



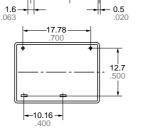
UL/CSA, TÜV approved type is standard.

TYPES AND COIL DATA (at 20°C 68°F)

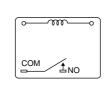
Part No.		Nominal	Pick-up	Drop-out	Coil	Nominal	Nominal	Max.
Sealed type	Flux-resistant type	voltage, V DC	voltage V DC (max.)	voltage V DC (min.)	resistance, W (±10%)	operating current, mA (±10%)	operating power, mW	allowable voltage, V DC
JVN1a-4.5V	JVN1aF-4.5V	4.5	3.375	0.23	101	44.4	200	6.75
JVN1a-6V	JVN1aF-6V	6	4.5	0.3	180	33.3	200	9
JVN1a-9V	JVN1aF-9V	9	6.75	0.45	405	22.2	200	13.5
JVN1a-12V	JVN1aF-12V	12	9	0.6	720	16.7	200	18
JVN1a-18V	JVN1aF-18V	18	13.5	0.9	1,620	11.1	200	27
JVN1a-24V	JVN1aF-24V	24	18	1.2	2,880	8.3	200	36
JVN1a-48V	JVN1aF-48V	48	36	2.4	11,520	4.2	200	72
JVN1a-100V	JVN1aF-100V	100	60	4	16,600	6	600	110

DIMENSIONS









General tolerance

PC board pattern 12.7 **2.0** .079 10.16

mm inch

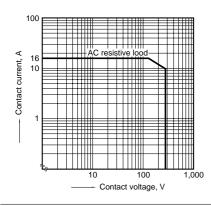
Dimension:

Max. 1mm .039 inch:

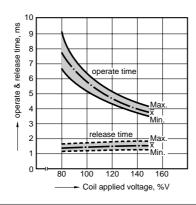
 $\pm 0.2 \pm .008$ 1 to 5mm .039 to .197 inch: ±0.3 ±.012 Min. 5mm .197 inch: ±0.4 ±.016

REFERENCE DATA

1. Max. switching power

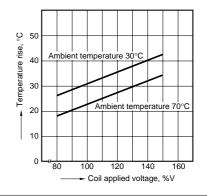


2. Operate/release time Sample: JVN1aF-12 V, 6 pcs.

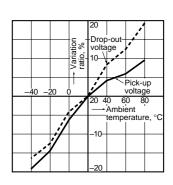


3. Coil temperature rise Sample: JVN1aF-12 V, 6 pcs. point measured: coil

Contact current: 16 A



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



5. Life curve

Operation frequency: 20 times/min. Ambient temperature: room temperature

