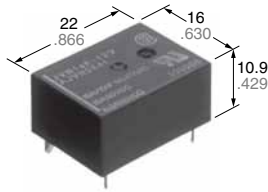




THE DATASHEET OF JVN1A-24V





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 × 22 mm .630 × .866 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.

About Cd-free contacts

We have introduced Cadmium free type products to reduce Environmental Hazardous Substances. (The suffix "F" should be added to the part number)
Please replace parts containing Cadmium with Cadmium-free products and evaluate them with your actual application before use because the life of a relay depends on the contact material and load.

Compliance with RoHS Directive

SPECIFICATIONS

Contact

| | | | |
|---|---|---|-------------------|
| Arrangement | 1 Form A | | |
| Initial contact resistance, max. (By voltage drop 6 V DC 1 A) | Max. 100 mΩ | | |
| Contact material | AgSnO ₂ type | | |
| 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) | |
| | Min. switching capacity ^{#1} (Reference value) | 100 mA, 5 V 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 | 3×10 ⁴ |
| | | 10 A 30 V DC | 10 ⁵ |
| | Flux-resistant type | 10 A 125 V AC | 10 ⁵ |

Coil

| | |
|-------------------------|--|
| Nominal operating power | 200 mW (DC 4.5 to 48 V) 600 mW (DC 100 V) |
|-------------------------|--|

^{#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.

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 6. Conditions for operation, transport and storage mentioned in AMBIENT ENVIRONMENT.

Characteristics

| | | |
|--|---|--|
| Max. operating speed | 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 resistance | Min. 1,000 MΩ (at 500 V DC) | |
| Initial breakdown voltage (Detection current: 10 mA) | Between open contacts | 1,000 Vrms for 1 min. |
| | Between contacts and coil | 2,500 Vrms for 1 min. |
| Surge voltage between contact and coil | 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 of operation, transport and storage ^{*8} | 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 | 200 m/s ² {20G} ^{*5} |
| | Destructive | 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 | |

JV-N

TYPICAL APPLICATIONS ORDERING INFORMATIONS

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

Ex. JVN 1a F - 4.5 V - F

| | | | |
|---------------------|--|-------------------------------------|----------------------------|
| Contact arrangement | Protective construction | Coil voltage (DC) | Contact material |
| 1a: 1 Form A | Nil: Sealed type F: Flux-resistant type | 4.5, 6, 9, 12, 18, 24, 48, 100 V | F: AgSnO ₂ type |

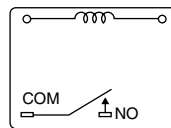
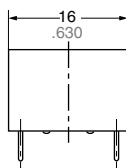
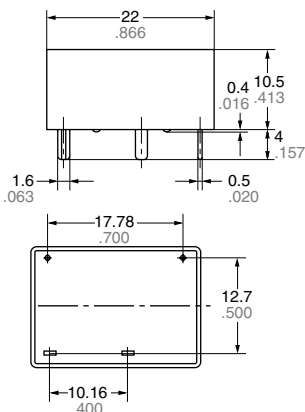
UL/CSA, TÜV approved type is standard.
Please inquire about the previous products (Cadmium containing parts).

TYPES AND COIL DATA (at 20°C 68°F)

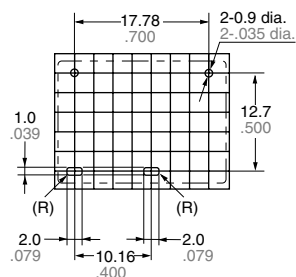
| Part No. | | Nominal voltage, V DC | Pick-up voltage V DC (max.) | Drop-out voltage V DC (min.) | Coil resistance, W (±10%) | Nominal operating current, mA (±10%) | Nominal operating power, mW | Max. allowable voltage, V DC |
|--------------|---------------------|-----------------------|-----------------------------|------------------------------|-------------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

DIMENSIONS

mm inch



PC board pattern

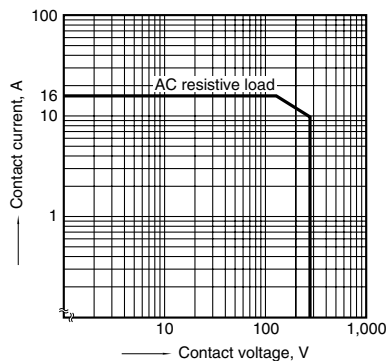


Dimension:
Max. 1mm .039 inch: $\pm 0.2 \pm .008$
1 to 5mm .039 to .197 inch: $\pm 0.3 \pm .012$
Min. 5mm .197 inch: $\pm 0.4 \pm .016$

General tolerance
 $\pm 0.2 \pm .008$
 $\pm 0.3 \pm .012$
 $\pm 0.4 \pm .016$

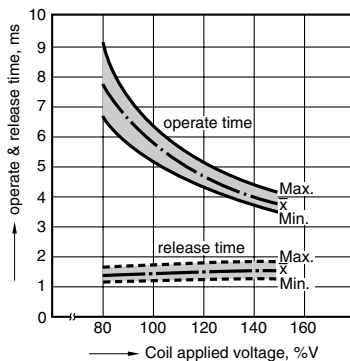
REFERENCE DATA

1. Max. switching power



2. Operate/release time

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

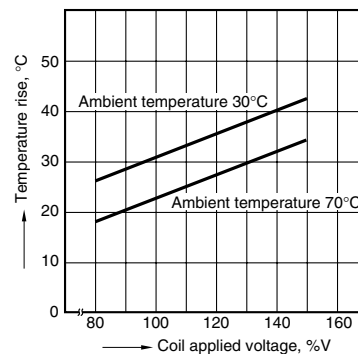


3. Coil temperature rise

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

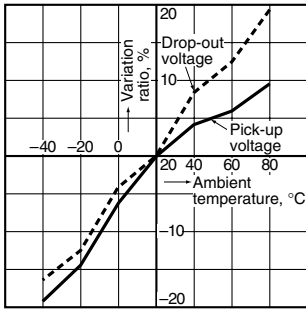
point measured: coil inside

Contact current: 16 A



4. Ambient temperature characteristics



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



For Cautions for Use, see Relay Technical Information.

Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

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