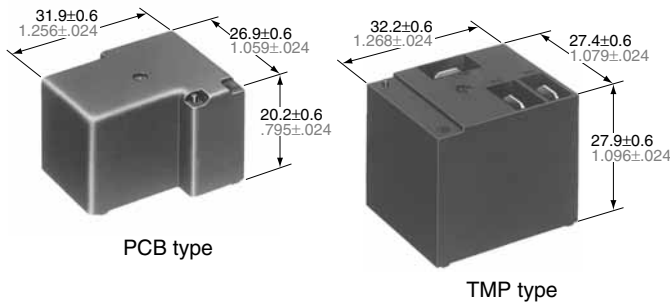


**Panasonic**  
ideas for life

**MASTER**  
ELECTRONICS  
COMPACT ECONOMICAL  
30 AMP. RELAY

**JT-N RELAYS**



PCB type

TMP type

## FEATURES

- High switching capacity — 30 A for 1 Form A
- 2 contact arrangements — 1 Form A or 1 Form C
- “TMP” types available
- UL/C-UL recognized
- Class F types standard

RoHS Directive compatibility information  
<http://www.nais-e.com/>

## SPECIFICATIONS

### Contacts

		PCB & TMP type	
Arrangement		1 Form A	1 Form C
Initial contact resistance, max. (By voltage drop method, 6 V DC 1 A)		50 mΩ	
Contact material		AgSnO <sub>2</sub> type	
Rating	Max. switching power	8310 VA	N.C.: 2770 VA N.O.: 5540 VA
	Max. switching voltage	277 V AC	
	Max. switching current	30 A	N.C.: 10 A N.O.: 20 A
	Min. switching capacity <sup>#1</sup> (Reference value)	100 mA, 5 V DC	
Expected life	Mechanical	Min. 1×10 <sup>7</sup>	
	Electrical (Resistive load)	20 A 277 V AC Min. 1×10 <sup>5</sup> *	N.O.: 20 A 277 V AC Min. 1×10 <sup>5</sup> * N.C.: 10 A 277 V AC Min. 1×10 <sup>5</sup> *

\* The life is for open venting-hole condition.

### Coil at 20°C 68°F

Nominal operating power	Approx. 800 mW
-------------------------	----------------

### Characteristics

		PCB & TMP type	
Initial insulation resistance <sup>*1</sup>		Min. 100 MΩ at 500 V DC	
Initial breakdown voltage <sup>*2</sup>	Between contacts	1,200 Vrms	
	Between contacts and coil	2,500 Vrms	
Operate time <sup>*3</sup> (at nominal voltage)		Max. 20 ms	
Release time (without diode) <sup>*3</sup> (at nominal voltage)		Max. 10 ms	
Shock resistance	Functional <sup>*4</sup>	98 m/s <sup>2</sup> {10 G}	
	Destructive <sup>*5</sup>	980 m/s <sup>2</sup> {100 G}	
Vibration resistance	Functional <sup>*6</sup>	10 to 55 Hz at double amplitude of 1.5 mm	
	Destructive	10 to 55 Hz at double amplitude of 2 mm	
Conditions for operation, transport and storage <sup>*7</sup> (Not freezing and condensing at low temperature)	Ambient temp.	-55°C to +85°C -67°F to +185°F	
	Humidity	5 to 85% R.H.	
Unit weight		PCB type: Approx. 25 g (.88 oz) TMP type: Approx. 30 g (1.06 oz)	

#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.
- \*<sup>1</sup> Measurement at same location as “Initial breakdown voltage” section
- \*<sup>2</sup> Detection current: 10 mA
- \*<sup>3</sup> Excluding contact bounce time
- \*<sup>4</sup> Half-wave pulse of sine wave: 11ms; detection time: 10μs
- \*<sup>5</sup> Half-wave pulse of sine wave: 6ms
- \*<sup>6</sup> Detection time: 10μs
- \*<sup>7</sup> Refer to 6. Conditions for operation, transport and storage mentioned in AMBIENT ENVIRONMENT

## TYPICAL APPLICATIONS

- Automotive
- Air conditioner
- Heating & ventilation
- Home appliance

# JT-N

## ORDERING INFORMATION



JT-N Relays (PCB and TMP type)

JTN	1a	S	TMP	F	DC12V
Contact arrangement	Protective construction	Mounting classification	Coil insulation	Coil voltage	
1a: 1 Form A 1: 1 Form C	S: Sealed type	PA: PCB type TMP: TMP type	F: Class F	DC 5, 6, 9, 12, 15, 18, 24 V	

Notes: 1. UL/CSA approved type is standard.  
2. Standard packing: PCB type: Carton: 50 pcs. Case: 500 pcs.  
TMP type: Carton: 50 pcs. Case: 300 pcs.

## COIL DATA (at 20°C 68°F)

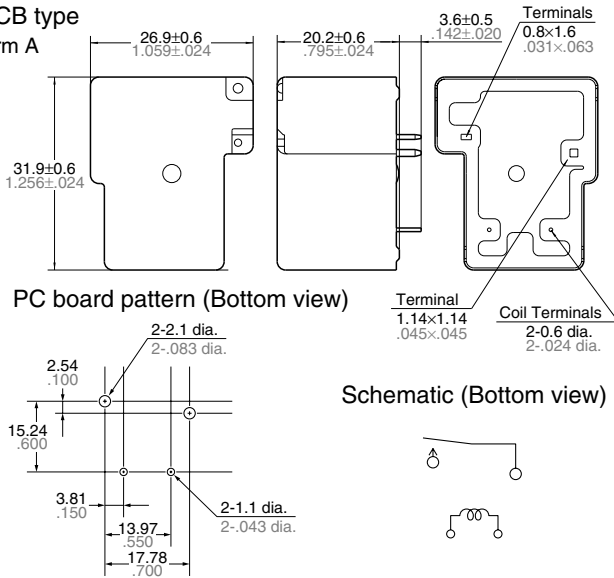
Nominal voltage, V DC	Pick-up voltage, V DC (max.) (Initial)	Drop-out voltage, V DC (min.) (Initial)	Coil resistance, Ω (±10%)		Nominal operating power, mW	Max. allowable voltage, V DC (at 70°C 158°F)
			PCB & TMP	PCB & TMP		
5	3.75	0.5	31	800	6	
6	4.5	0.6	45	800	7.2	
9	6.75	0.9	101	800	10.8	
12	9.0	1.2	180	800	14.4	
15	11.25	1.5	281	800	18	
18	13.5	1.8	405	800	21.6	
24	18.0	2.4	720	800	28.8	

## DIMENSIONS

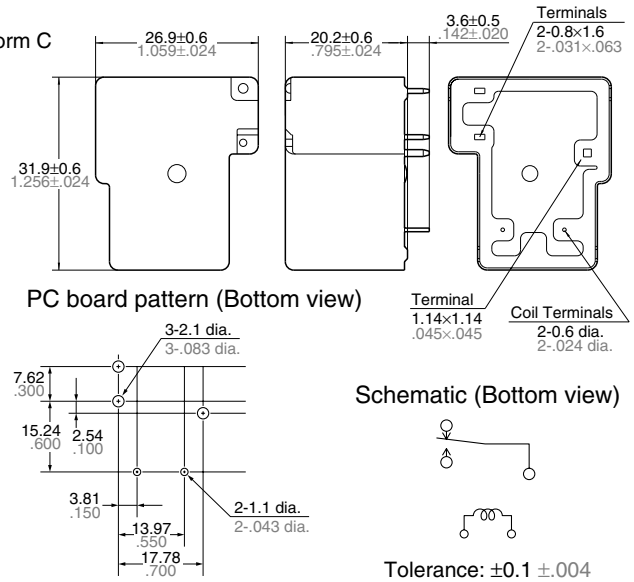
mm inch

### 1. PCB type

#### 1 Form A

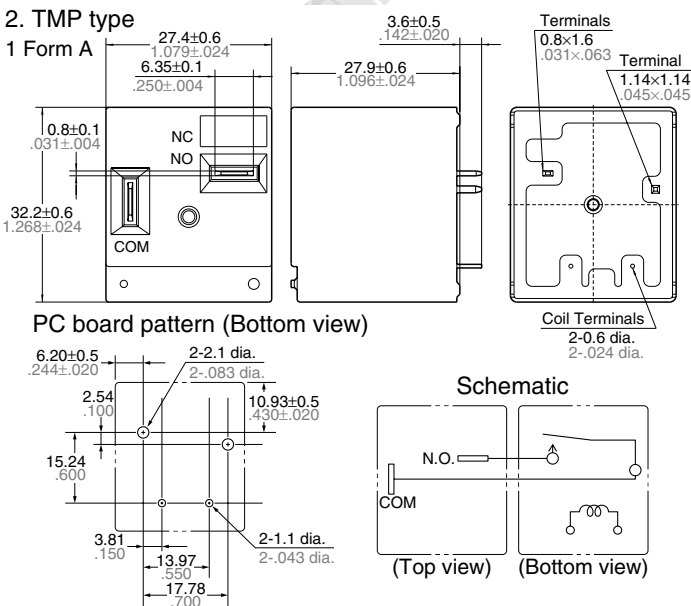


#### 1 Form C

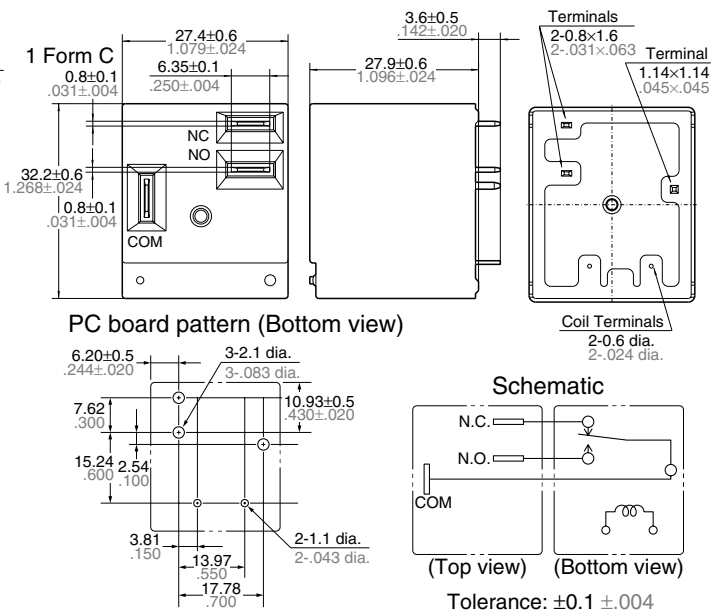


### 2. TMP type

#### 1 Form A



#### 1 Form C

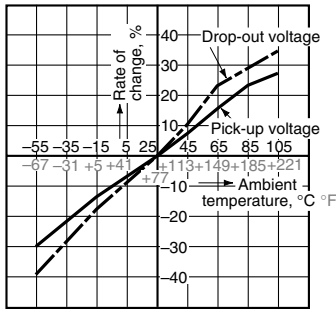


## REFERENCE DATA



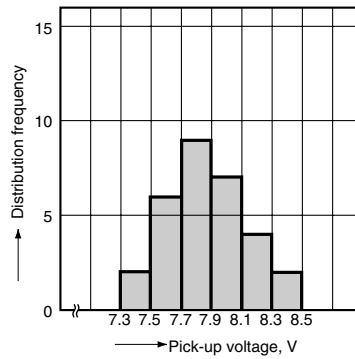
1. Change of rate of pick-up and drop-out voltage (at 20°C 68°F)

Sample: JTN1S-TMP-F-DC24V (6 pcs.)



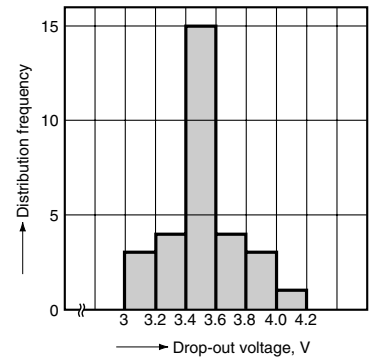
2. Distribution frequency of pick-up voltage (at 20°C 68°F)

Sample: JTN1S-TMP-F-DC12V (30 pcs.)



3. Distribution frequency of drop-out voltage (at 20°C 68°F)

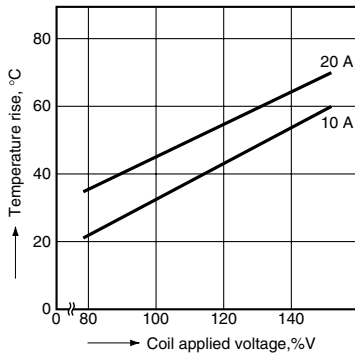
Sample: JTN1S-TMP-F-DC12V (30 pcs.)



4.-(1) Coil temperature rise (TMP type)\*

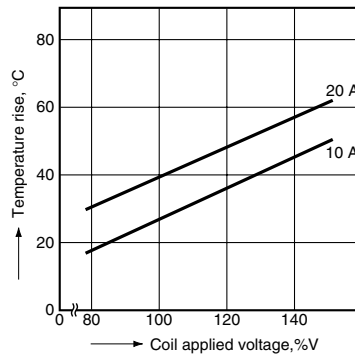
Ambient temperature: 20°C 68°F

Sample: JTN1aS-TMP-F-DC12V (6 pcs.)



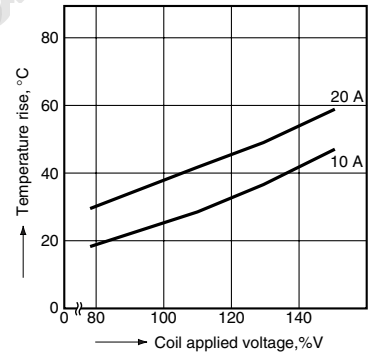
Ambient temperature: 85°C 185°F

Sample: JTN1aS-TMP-F-DC12V (6 pcs.)



Ambient temperature: 105°C 221°F

Sample: JTN1aS-TMP-F-DC12V (6 pcs.)



\* Coil temperature rise of sealed types are same as data of the dust cover type.

**For Cautions for Use, see Relay Technical Information**