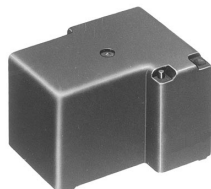


# NAIS

## 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
- Sealed and “TMP” types available
- UL/CSA recognized (PCB & TMP type: UL508 group A spacing, UL873 spacing)
- Class F types standard for PCB & TMP type

## 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		Silver alloy	
Rating	Max. switching power	8310 VA	N.C.: 2770 VA N.O.: 5440 VA
	Max. switching voltage	277 V AC	
	Max. switching current	30 A	N.C.: 10 A N.O.: 20 A
Min. $1 \times 10^7$			
Expected life Mechanical Electrical (Resistive load)		20 A 277 V AC Min. $1 \times 10^5$ *	N.O.: 20 A 277 V AC Min. $1 \times 10^5$ * N.C.: 10 A 277 V AC Min. $1 \times 10^5$ *

\* For sealed types, the life shown is for open venting-hole condition.

### Coil at 20°C 68°F

PCB & TMP type	
Minimum operating power	Approx. 450 mW
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. 15 ms
Release time (without diode)* <sup>3</sup> (at nominal voltage)		Max. 10 ms
Shock resistance	Functional* <sup>4</sup>	Min. 98 m/s <sup>2</sup> {10 G}
	Destructive* <sup>5</sup>	Min. 980 m/s <sup>2</sup> {100 G}
Vibration resistance	Functional* <sup>6</sup>	Max. 88.2 m/s <sup>2</sup> {9 G}, 10 to 55 Hz at double amplitude of 1.5 mm
	Destructive	Max. 117.6 m/s <sup>2</sup> {12 G}, 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)

### 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 5. Conditions for operation, transport and storage mentioned in AMBIENT ENVIRONMENT (Page 24).

## TYPICAL APPLICATIONS

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

## 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 (UL508) TMP: TMP type (UL508)	F: Class F	DC 5, 6, 9, 12, 15, 18, 24 V	

UL/CSA approved type is standard.

Note: DC rating is available for class A type. For the class A type, please consult us.

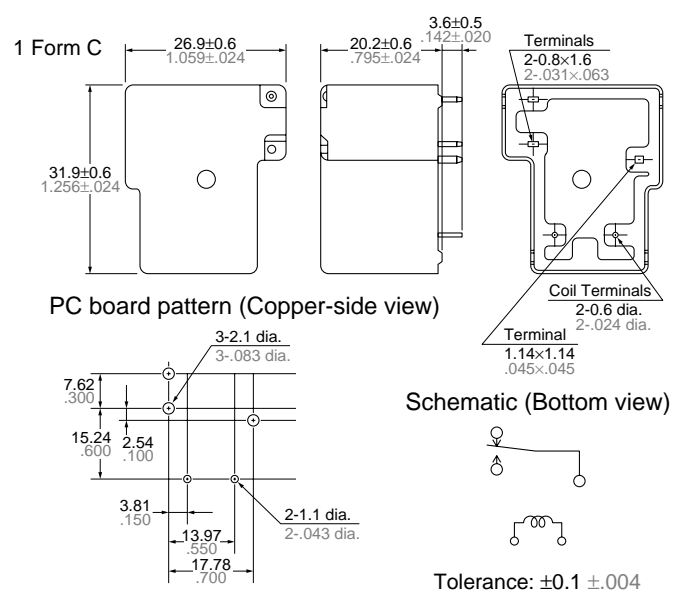
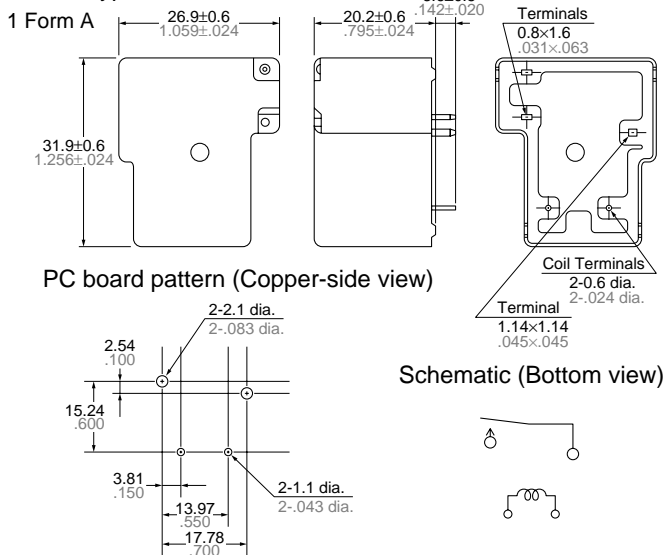
## COIL DATA (at 20°C 68°F)

Nominal voltage, V DC	Pick-up voltage, V DC (max.) (Initial)	Drop-out voltage, V DC (min.) (Initial)	Coil resistance, $\Omega$ ( $\pm 10\%$ )		Nominal operating power, mW		Max. allowable voltage, V DC (at 70°C 158°F)
			Open	PCB & TMP	Open	PCB & TMP	
5	3.75	0.5	26	31	962	800	6
6	4.5	0.6	38	45	947	800	7.2
9	6.75	0.9	94	101	862	800	10.8
12	9.0	1.2	155	180	930	800	14.4
15	11.25	1.5	256	281	879	800	18
18	13.5	1.8	380	405	853	800	21.6
24	18.0	2.4	660	720	873	800	28.8

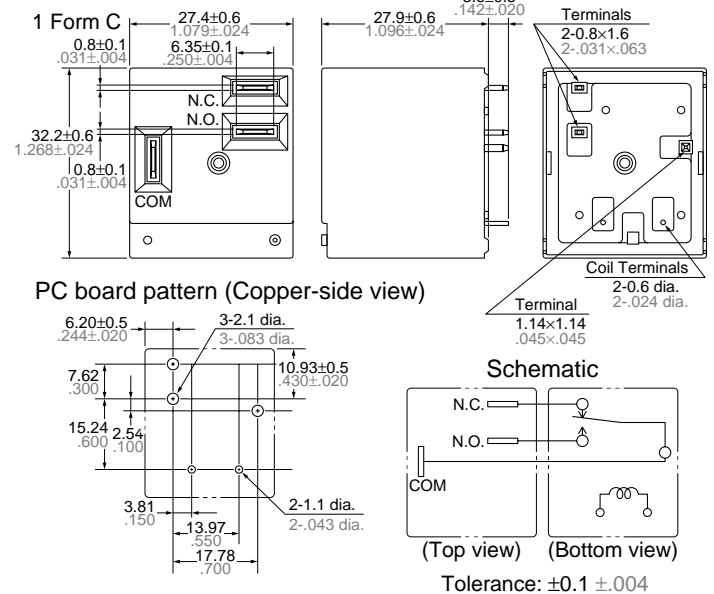
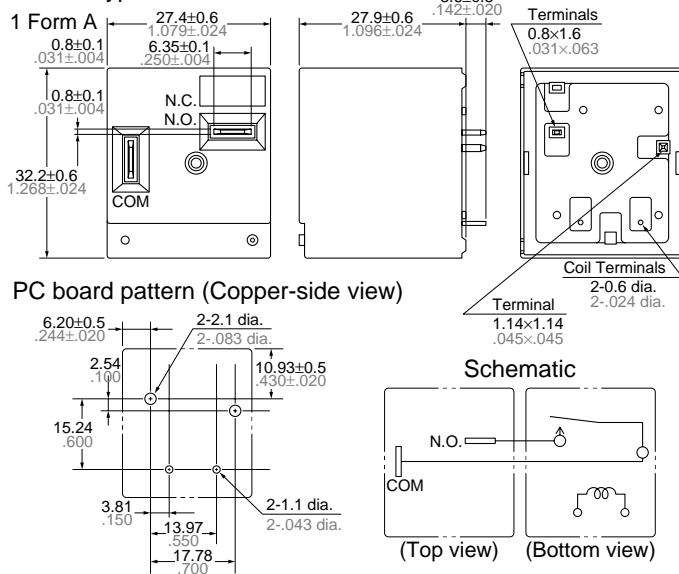
## DIMENSIONS

mm inch

### 1. PCB type



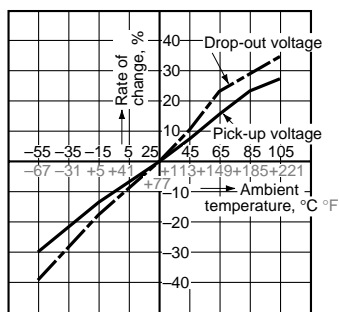
### 2. TMP type



# REFERENCE DATA

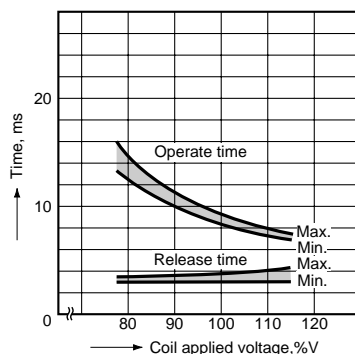
1. Change of rate of pick-up and drop-out voltage (at 20°C 68°F)

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



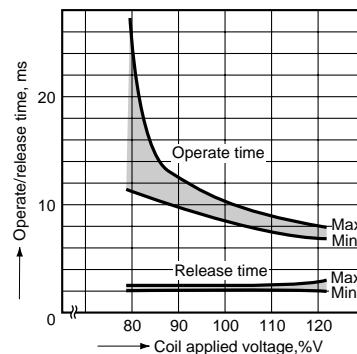
2. Operate & release time (at 20°C 68°F)

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



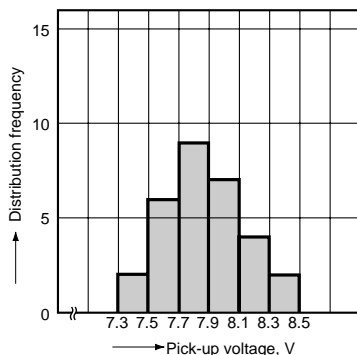
3. Operate & release time (at 20°C 68°F)

Sample: JTN1aS-TMP-F-DC24V (6 pcs.)



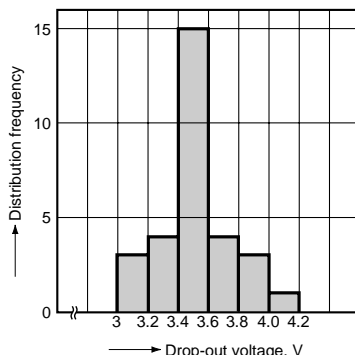
4. Distribution frequency of pick-up voltage (at 20°C 68°F)

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



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

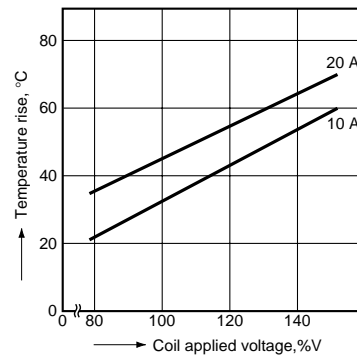
Sample: JTN1S-TMP-F-DC12V (30 pcs.)



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

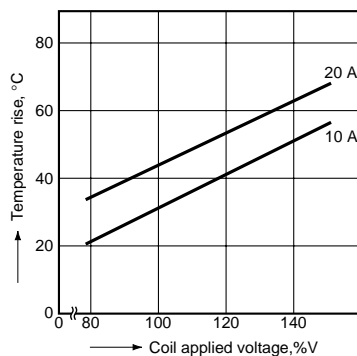
Ambient temperature: 20°C 68°F

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

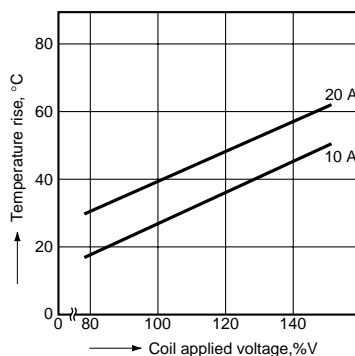


\* Coil temperature rise of sealed types are same as data of the dust cover type.

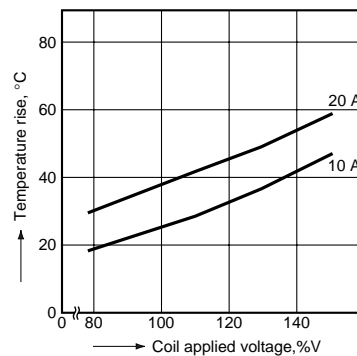
Ambient temperature: 55°C 131°F  
Sample: JTN1aS-TMP-F-DC12V (6 pcs.)



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.)



**For Cautions for Use, see Relay Technical Information (Page 11 to 39).**