

PCB type

TMP type

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

### 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

## 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
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### 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.

\*1 Measurement at same location as “Initial breakdown voltage” section

\*2 Detection current: 10 mA

\*3 Excluding contact bounce time

\*4 Half-wave pulse of sine wave: 11ms; detection time: 10μs

\*5 Half-wave pulse of sine wave: 6ms

\*6 Detection time: 10μs

\*7 Refer to 6. Conditions for operation, transport and storage mentioned in AMBIENT ENVIRONMENT

## TYPICAL APPLICATIONS

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

**ORDERING INFORMATION**

JT-N Relays (PCB and TMP type)

JT-N		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.

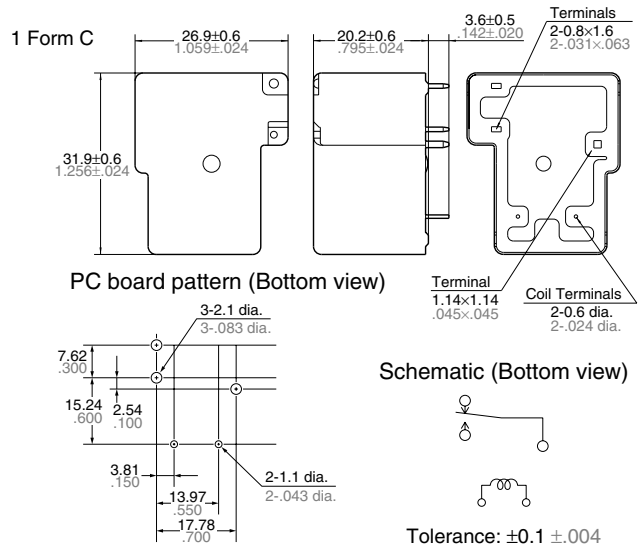
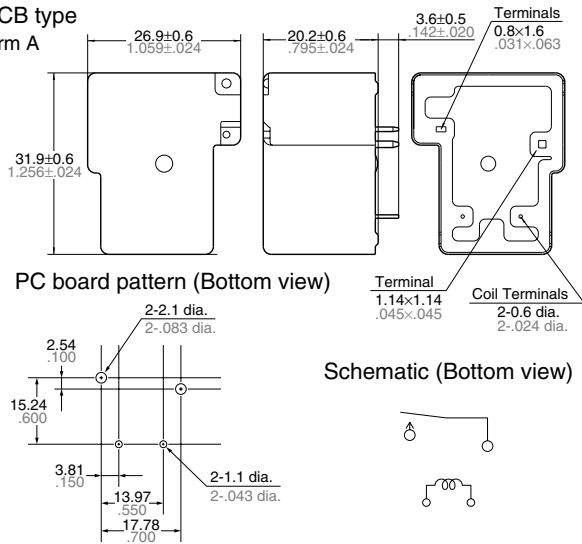
**COIL DATA (at 20°C 68°F)**

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		
5	3.75	0.5	31	800	6
6	4.5	0.6	45		7.2
9	6.75	0.9	101		10.8
12	9.0	1.2	180		14.4
15	11.25	1.5	281		18
18	13.5	1.8	405		21.6
24	18.0	2.4	720		28.8

**DIMENSIONS**

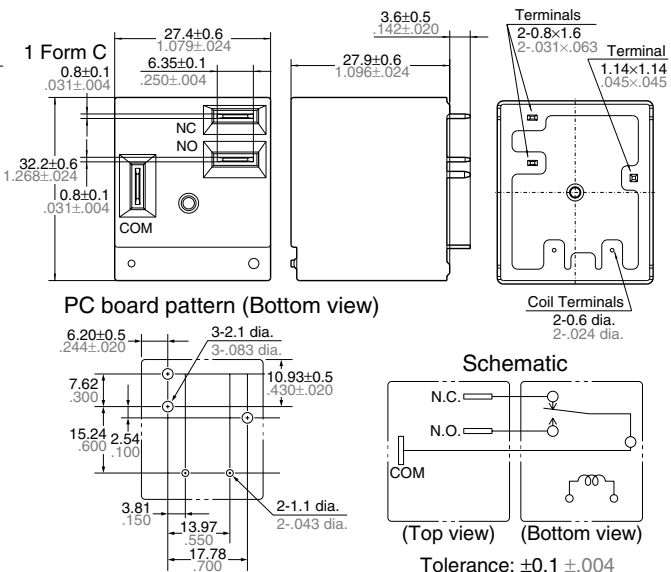
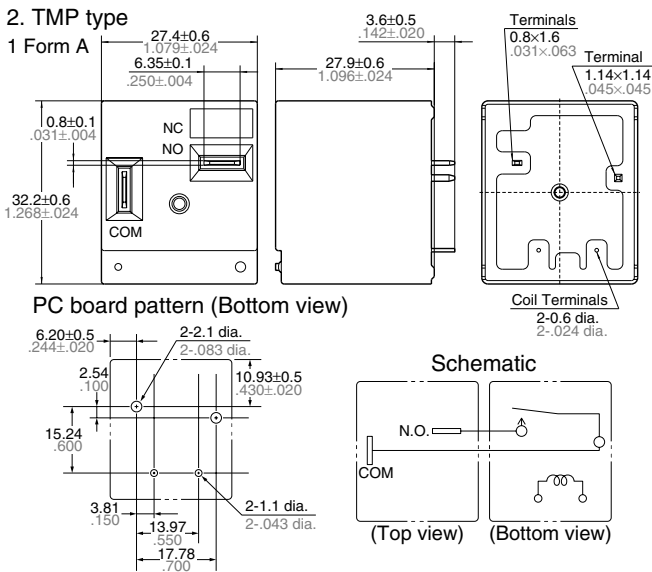
mm inch

1. PCB type  
1 Form A



Tolerance: ±0.1 ±.004

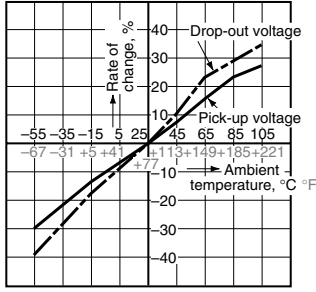
2. TMP type  
1 Form A



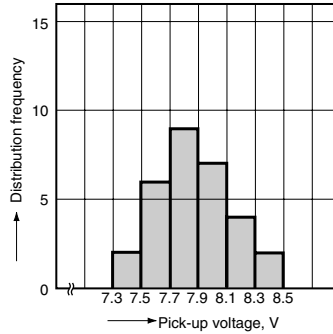
Tolerance: ±0.1 ±.004

**REFERENCE DATA**

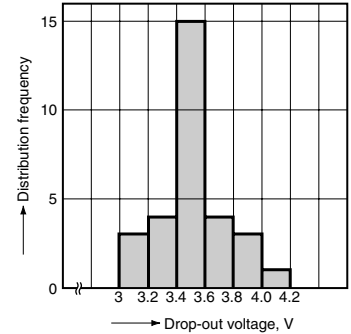
1. Change of rate of pick-up and drop-out voltage (at 20°C 68°F)  
 Sample: JTN1S-TMP-F-DC24V (6 pcs.)



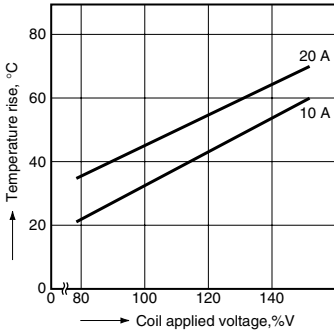
2. Distribution frequency of pick-up voltage (at 20°C 68°F)  
 Sample: JTN1S-TMP-F-DC12V (30 pcs.)



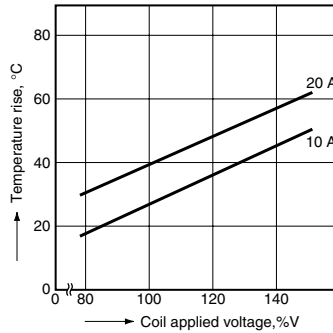
3. Distribution frequency of drop-out voltage (at 20°C 68°F)  
 Sample: JTN1S-TMP-F-DC12V (30 pcs.)



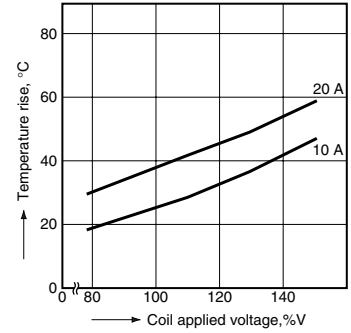
4.-(1) Coil temperature rise (TMP type)\*  
 Ambient temperature: 20°C 68°F  
 Sample: JTN1aS-TMP-F-DC12V (6 pcs.)



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**