

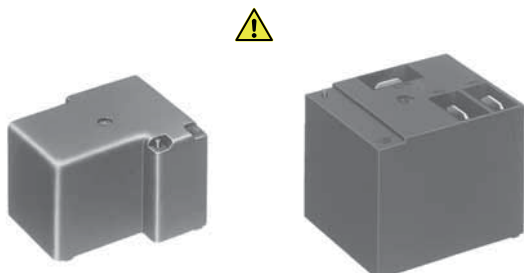
⚠ Not for new applications.



**Panasonic**  
ideas for life

Compact economical  
30 A relay

**JT-N RELAYS**



PCB type

TMP type

⚠ Products are not for new applications.

## FEATURES

- High switching capacity — 30 A for 1 Form A
- 2 contact arrangements — 1 Form A or 1 Form C
- “TMP” types available
- UL/CSA 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>	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>	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)	

#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

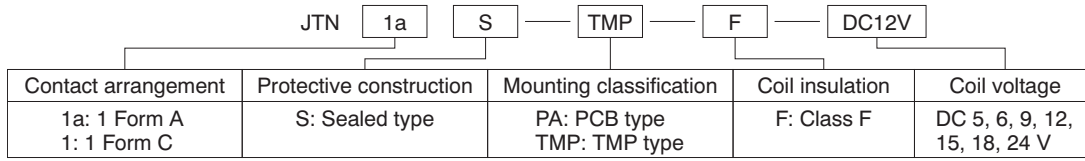
- \* Specifications will vary with foreign standards certification ratings.
- \*<sup>1</sup> Measurement at same location as “Initial breakdown voltage” section
- \*<sup>2</sup> Detection current: 10 mA
- \*<sup>3</sup> Excluding contact bounce time
- \*<sup>4</sup> Half-wave pulse of sine wave: 11ms; 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. Usage, Storage and Transport Conditions” in **AMBIENT ENVIRONMENT** section in Relay Technical Information.

## TYPICAL APPLICATIONS

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

# ORDERING INFORMATION

JT-N Relays (PCB and TMP type)



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)

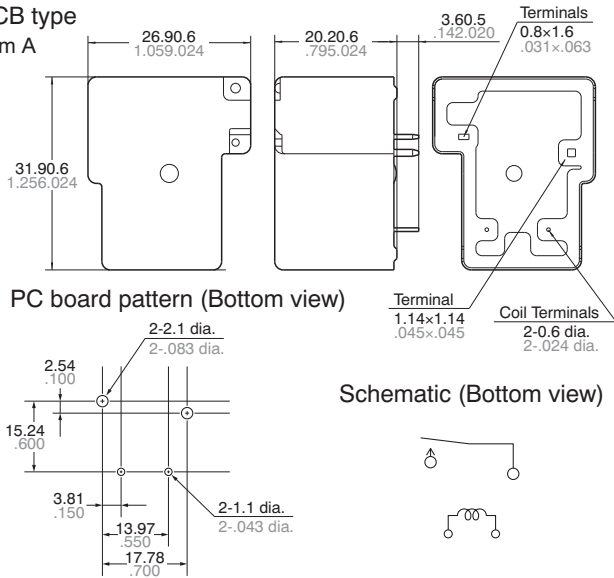
Nominal voltage, V DC	Pick-up voltage, V DC (max.) (Initial)	Drop-out voltage, V DC (min.) (Initial)	Coil resistance, Ω (±10%)		Nominal operating power, mW		Max. allowable voltage, V DC (at 70°C 158°F)
			PCB & TMP		PCB & TMP		
5	3.75	0.5	31		800		6
6	4.5	0.6	45		800		7.2
9	6.75	0.9	101		800		10.8
12	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)

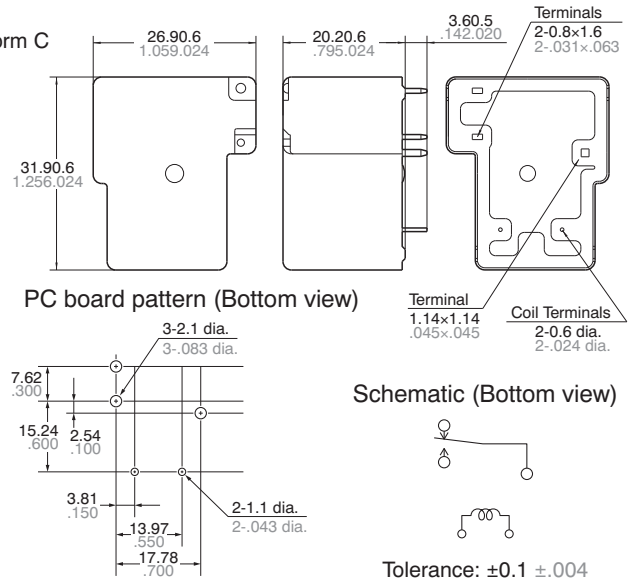
Download [CAD Data](#) from our Web site.

### CAD Data

1. PCB type  
1 Form A



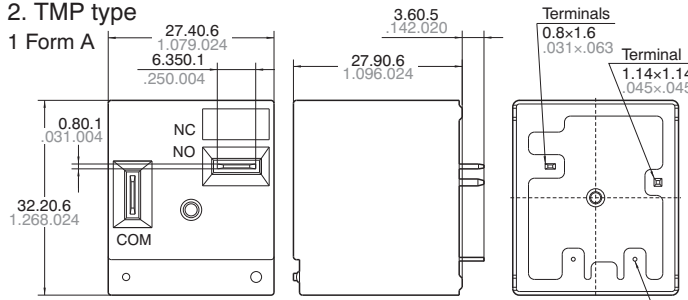
1 Form C



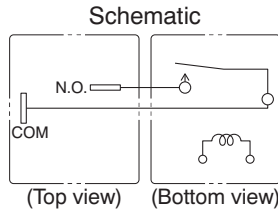
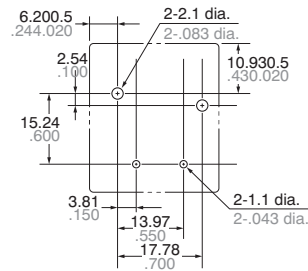
CAD Data

2. TMP type

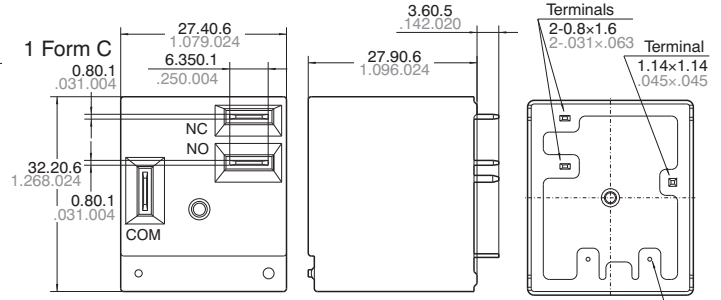
1 Form A



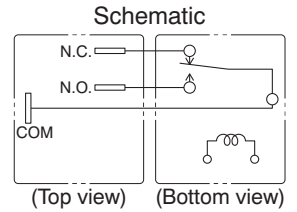
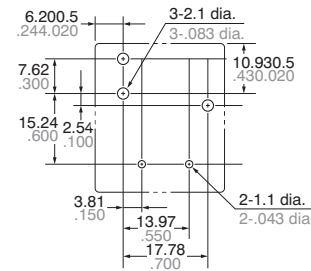
PC board pattern (Bottom view)



1 Form C



PC board pattern (Bottom view)

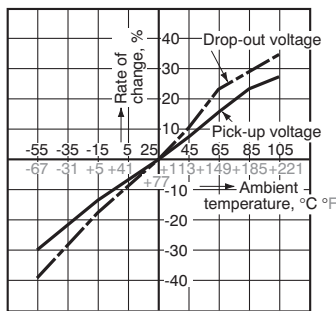


Tolerance:  $\pm 0.1 \pm .004$

REFERENCE DATA

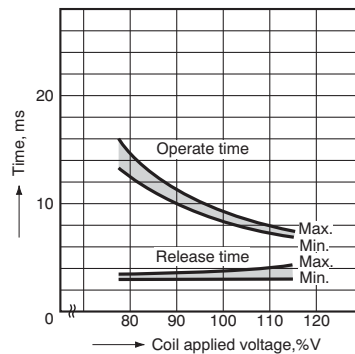
1. Change of rate of pick-up and drop-out voltage (at 20°C 68°F)

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



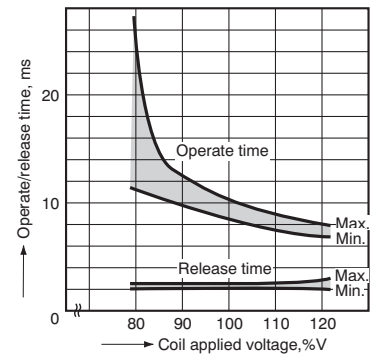
2. Operate & release time (at 20°C 68°F)

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



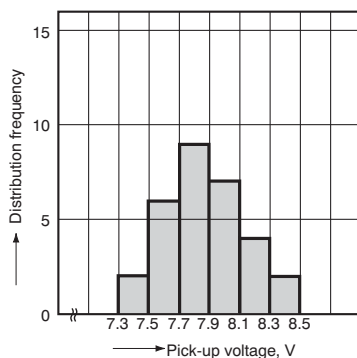
3. Operate & release time (at 20°C 68°F)

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



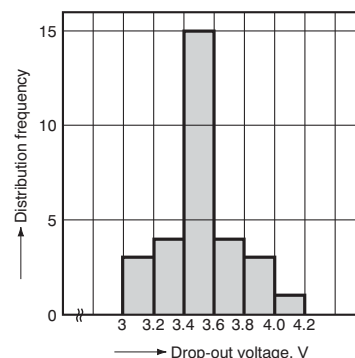
4. Distribution frequency of pick-up voltage (at 20°C 68°F)

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



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

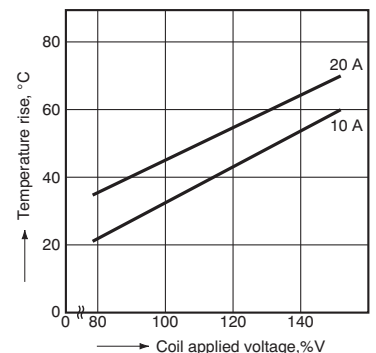
Sample: JTN1S-TMP-F-DC12V (30 pcs.)



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

Ambient temperature: 20°C 68°F

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

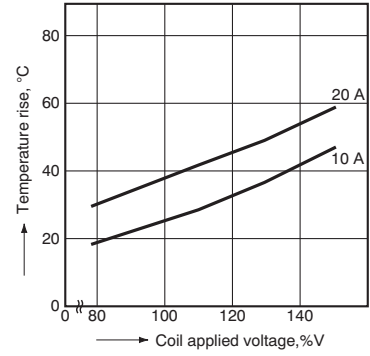
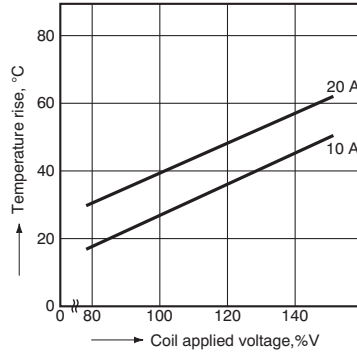
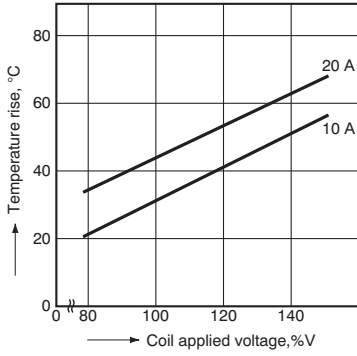


\* Coil temperature rise of sealed types are same as data of the dust cover type.

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.)



**SAFETY STANDARDS**

Item	UL/C-UL (Recognized)		
		File No.	Contact rating
1 Form A		E43028	30A 277V AC, 30A 28V DC, 2HP 250V AC
1 Form C	N.O.	E43028	20A 277V AC, 20A 28V DC, 2HP 250V AC
	N.C.	E43028	10A 277V AC, 10A 28V DC, 1/2HP 250V AC

\* CSA standard: Certified by C-UL

**For Cautions for Use, see [Relay Technical Information](#).**