Miniature High Power Relay	CT

Features

- 40A switching capability
- 4kV dielectric strength (between coil and contacts)
- Heavy load up to 7,200VA
- PCB coil terminal, ideal for duty load
- Unenclosed and plastic sealed type available
- UL insulation system: Class F available

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(File No.:E134581)

1. COIL DATA (at 23℃)

1) DC Type

Nominal Voltage (VDC)	Pick-up Voltage (VDC)	Drop-out Voltage (VDC)	Max Allowable Voltage (VDC)	Coil Current (mA)(±10%)	Coil Resistance (Ω)	Coil Power (mW)
5	3.75	0.5	6.50	180	27 x (1±10%)	Approxi. 900
6	4.50	0.6	7.80	150	40 x (1±10%)	
9	6.75	0.9	11.7	100	97 x (1±10%)	
12	9.00	1.2	15.6	75.0	155 x (1±10%)	
15	11.25	1.5	19.5	60.0	256 x (1±10%)	
18	13.50	1.8	23.4	50.0	380 x (1±10%)	
24	18.00	2.4	31.2	37.5	660 x (1±10%)	
48	36.00	4.8	62.4	18.8	2560 x (1±10%)	
70	52.50	7.0	91.0	12.9	5500 x (1±10%)	
110	82.50	11	143	8.18	13450 x (1±10%)	

2) AC Type

Nominal Voltage (VAC)	Pick-up Voltage (VAC)	Drop-out Voltage (VAC)	Max Allowable Voltage (VAC)	Coil Current (mA)(±10%)	Coil Resistance (Ω)	Coil Power (VA)
12	9.60	2.4	15.6	167	25 x (1±10%)	Approxi. 2
24	19.2	4.8	31.2	83.3	100 x (1±10%)	
120	96.0	24	156.0	16.7	2500 x (1±10%)	
208	166.4	41	270.4	9.62	11000 x (1±10%)	
220	176	44	286.0	9.10	13490 x (1±10%)	
240	192	48	286.0	8.30	13490 x (1±10%)	
277	220	54	360.1	7.22	15000 x (1±10%)	

Note: 1) When requiring pick-up voltage <80% of nominal voltage, special order allowed.

2) The data shown above are initial values at 50Hz. When requiring 60Hz, special order allowed.

2. CONTACT DATA

Contact Arrangement		1 Form A	1 Form B	1 Form C	
				NO	NC
Contact Resistance		50mΩ max. (at 1A 24VDC)			
Contact Material		$AgSnO_2$			
Max. Switching Voltage		277VAC / 28VDC			
Max. Switching Current		40A	15A	20A	10A
Max. Switching Power		7200VA / 560W	3600VA / 280W	4800VA / 560W	2400VA / 280W
Contact rating		30A 240VAC 20A 28VDC	15A 240VAC 10A 28VDC	20A 240VAC 20A 28VDC	10A 240VAC 10A 28VDC
Life Expectancy	Electrical	100,000 operations			
	Mechanical	10,000,000 operations			

3. CHARACTERISTICS

Insulation Resistance		1000MΩ (at 500VDC)
Dielectric Strength	Open Contacts	1500VAC 1min
	Contacts and Coil	"B" type: 4000VAC 1min Others: 2500VAC 1min
Operate Time (at nominal voltage)		DC type: 15ms max.
Release Time (at nominal voltage)		DC type: 10ms max.
Temperature Range		DC: -55℃ ~ 85℃ AC: -55℃ ~ 60℃
Shock Resistance	Functional	98 m/s^2
	Destructive	980 m/s^2
Vibration Resistance		10 ~ 55Hz, 1.5mm DA
Humidity		5 ~ 85% RH
Termination		PCB, PCB & QC
Construction		Plastic sealed type, Open type(only for DC coil)
Weight		Approx. 36g
Outline Dimension (L x W x H)		PCB: 32.3 x 27.1 x 20.0 mm PCB & QC: 32.4 x 27.5 x 27.8 mm

Note: 1) For plastic sealed type, the venting-hole should be excised in test. Typical electrical load & endurance: at 30A 240VAC, Resistive, at room temperature, 100,000 OPS, for NO contact.

2) The data shown above are initial values.

3) Please find coil temperature curve in the characteristic curves below.

4) UL insulation system: Class F, Class B

4. ORDERING INFORMATION

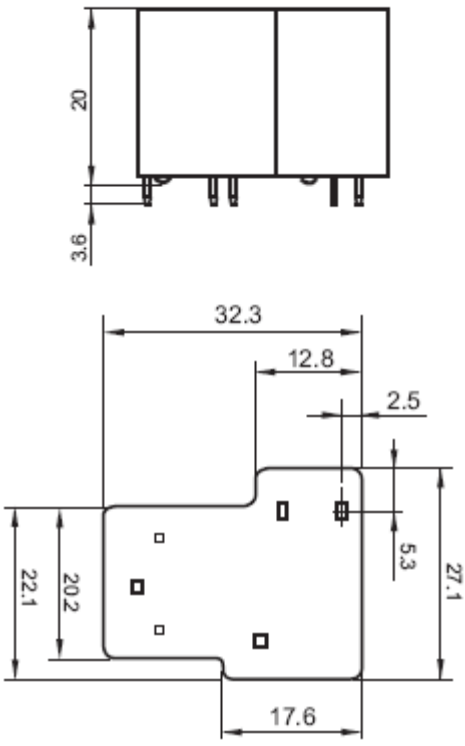
CT ①	11 ②	TMP ③	-	D12 ④	S ⑤	F ⑥

① Relay Model	CT
② Contact Arrangement	11: 1 Form A (SPST-NO) 111: 1 Form B (SPST-NC) 1: 1 Form C (SPDT)
③ Termination	Nil: With Pin NO. 6, Dielectric strength Between Coil and Contact: 2500VAC B: Without Pin NO. 6, Dielectric strength Between Coil and Contact: 4000VAC N: Without Pin NO. 6, Dielectric strength Between Coil and Contact: 2500VAC TMP: PCB & QC, Dielectric strength Between Coil and Contact: 2500VAC
④ Coil Voltage	DC: D5=5VDC, D6=6VDC, D9=9VDC, D12=12VDC, D15=15VDC, D18=18VDC, D24=24VDC, D48=48VDC, D70=70VDC, D110=110VDC AC: A12=12VAC, A24=24VAC, A120=120VAC, A208=208VAC, A220=220VAC, A240=240VAC, A277=277VAC
⑤ Construction	Nil: Open Type (Only for DC coil) S: Sealed type
⑥ Insulation Standard	Nil: Class B F: Class F

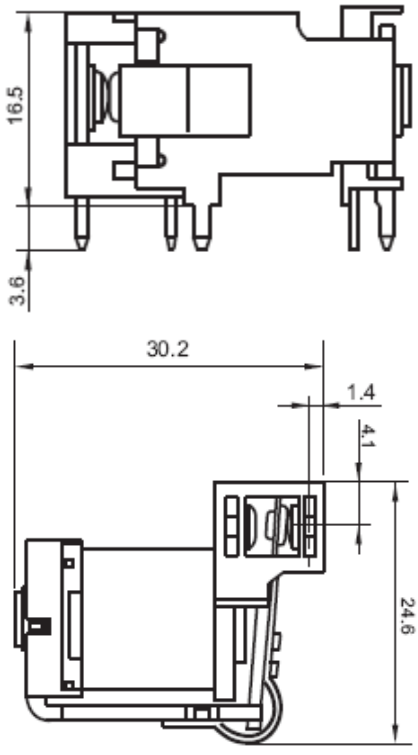
5. DIMENSIONS (Unit: mm)

Outline Dimensions

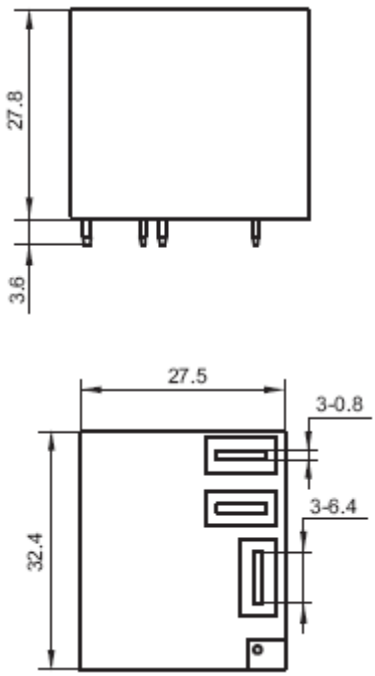
Sealed type



Open type

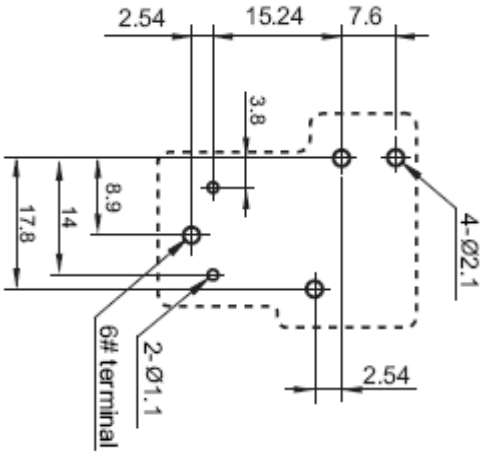


TMP type

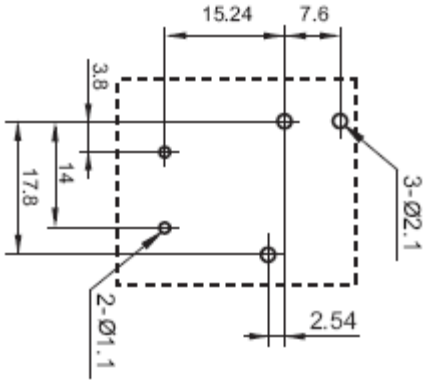


PCB Layout (Bottom View)

Sealed & Open type



TMP Type

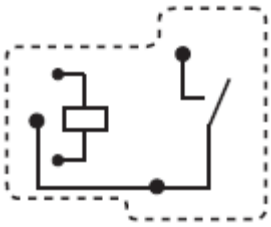


Remark: 1) In case of no tolerance shown in outline dimension: outline dimension ≤1mm, tolerance should be ±0.2mm; outline dimension >1mm and ≤5mm, tolerance should be ±0.3mm; outline dimension >5mm, tolerance should be ±0.4mm.

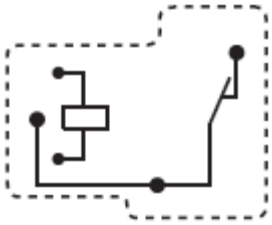
2) The tolerance without indicating for PCB layout is always ±0.1mm

Wiring Diagram (Bottom View)

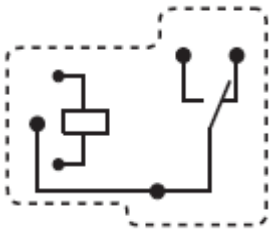
Sealed & Open type with 6# terminal



1 Form A

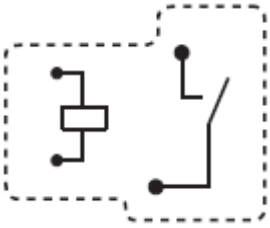


1 Form B

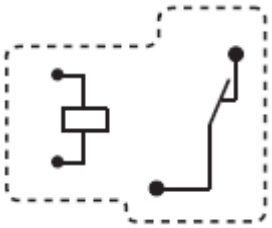


1 Form C

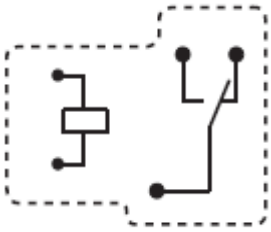
Sealed & Open type without 6# terminal



1 Form A

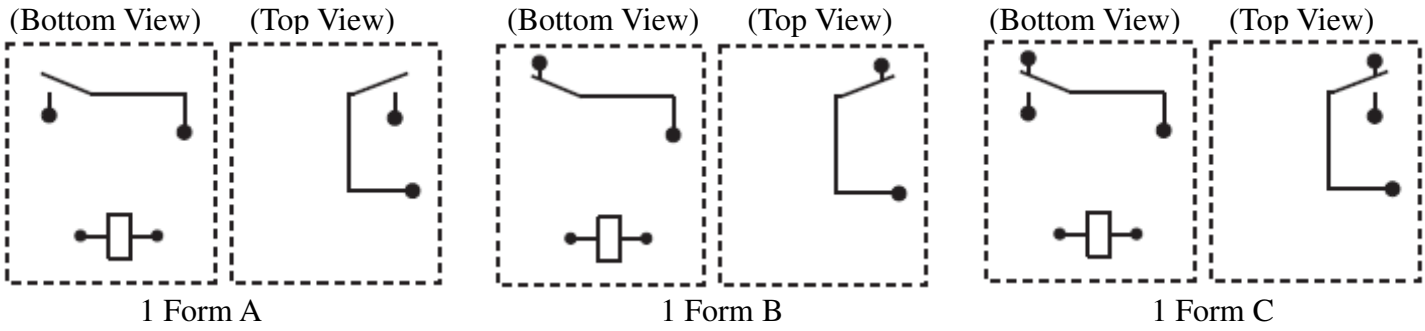


1 Form B



1 Form C

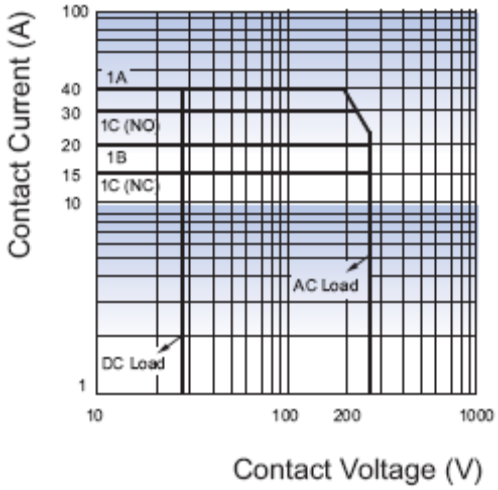
TMP type



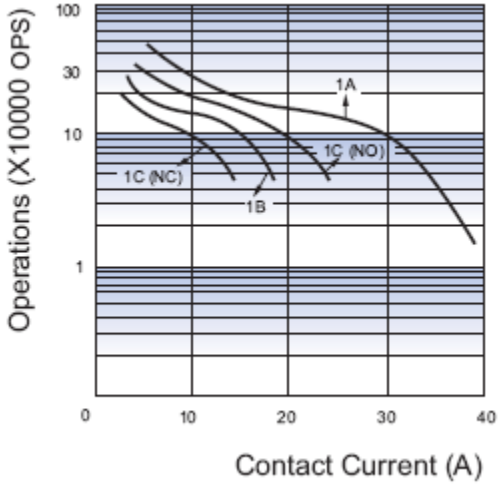
1 Form A　　1 Form B　　1 Form C

6. CHARACTERISTIC CURVES

Maximum Switching Power



Endurance Curve



Coil Temperature Rise