

## FEATURES

- UL & CQC safety approval.
- Meet UL Tungsten TV-3 and TV-8 rating.
- Smaller size at 16Amp switching capacity relay is for high-density PC board mounting technique.
- Meet 4000VAC dielectric voltage between coil and contacts.
- Meet 7000VAC surge voltage between coil and contacts.
- Employment of high performance contact material for high inrush current.
- Nominal power 540mW.
- Operating power 300mW.



UL FILE NO: E162117  
CQC FILE NO: CQC03001007008

## CONTACT RATINGS

- Contact Arrangement .....1 Form A (SPST-NO)  
.....2 Form A (DPST-NO)

### Max. Switching Power

1 Form A.....4432VA 480W  
2 Form A .....1385VA 150W

- Max. Switching Voltage.....277VAC 30VDC

### ● Max. Switching Current

1 Form A.....20A  
2 Form A.....8A

- Contact Resistance..... $\leq 100m\Omega$

### ● Resistive Load

1 Form A.....16A/277VAC, 20A / 125VAC, 16A / 30VDC  
2 Form A .....5A/277VAC, 8A/125VAC ,5A/30VDC

- Inductive Load (Cos $\phi$ =0.4, L/R=7ms)

1 Form A .....8A/250VAC , 8A/30VDC  
2 Form A.....2A/250VAC ,2A/30VDC

### ● TV Rating

1 Form A.....TV-8  
2 Form A.....TV-3

- Contact Material .....Ag Alloy

## CHARACTERISTICS

- Electrical Life..... $1 \times 10^5$
- Mechanical Life..... $1 \times 10^7$
- Initial Insulation Resistance.....Min. 100M $\Omega$  500VDC
- Contact Resistance (Initial)..... $\leq 100m\Omega$
- Operate Time..... $\leq 20ms$
- Release Time..... $\leq 10ms$

● Initial Dielectric Strength

- 1 Form A.....50/60Hz 1000VAC 1 min. (between open contacts)
- .....50/60Hz 4000VAC 1 min. (between contacts and coil)
- 2 Form A.....50/60Hz 1000VAC 1 min. (between open contacts)
- .....,50/60Hz 3000VAC 1 min. (between contacts and coil)

● Surge Strength

- 1 Form A..... 7000VAC
- 2 Form A .....5000VAC
- (Between contacts and coil 1×40μsec)

- Vibration Resistance.....Malfunction: 10 to 55Hz at Double Amplitude of 1.5mm
- .....Destructive: 10 to 55Hz at Double Amplitude of 1.5mm

- Shock Resistance.....Malfunction: 10G (11ms) / Destructive: 100G(6ms)

- Ambient Temperature.....-30℃~+65℃

- Relative Humidity.....85% at 40℃

- Unit Weight.....Approx. 13g

**ORDERING INFORMATION**

981 - 1A - 12 D S - F  
 1 2 3 4 5 6

Type of Insulation.....Nil = Class B  
 .....F = Class F

Enclosure.....Nil = General Type  
 .....S = Sealed Type

Coil Type.....D: DC

Coil Voltage.....3~48V

Contact Arrangement.....1A = 1 Form A (SPST-NO)  
 .....2A = 2 Form A (DPST-NO)

Model Number.....981

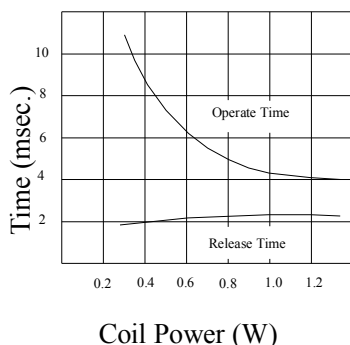
**COIL RATINGS (at 20℃)**

COIL TYPE	Coil Nominal Voltage (V)	Coil Resistance (Ω ± 10%)	Pick-Up Voltage (V) ≤	Drop-Out Voltage (V) ≥	Nominal Current (mA)
DC Standard Coils	3	17	2.25	0.3	176.5
	5	47	3.75	0.5	106.4
	6	68	4.5	0.6	88
	9	155	6.75	0.9	58
	12	270	9	1.2	44.4
	24	1100	18	2.4	21.8
	48	4400	36	4.8	11

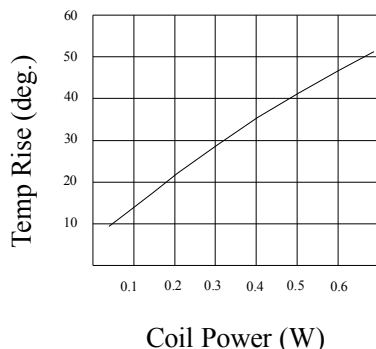
\* Max Continuous Voltage at 20℃: 110% of Coil Nominal Voltage.

## 981-1A Referential Data

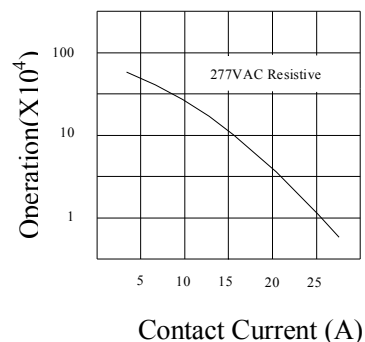
### Timing



### Coil Temperature Rise

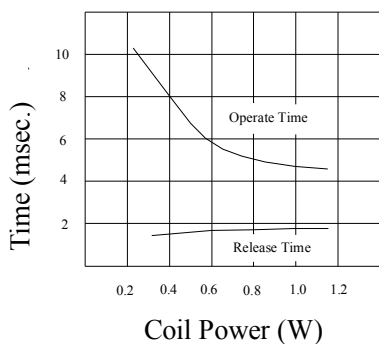


### Life Curves

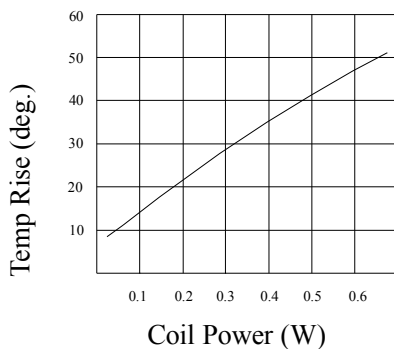


## 981-2A Referential Data

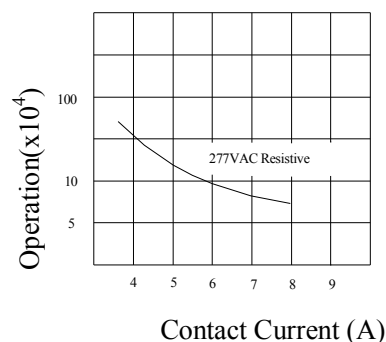
### Timing



### Coil Temperature Rise

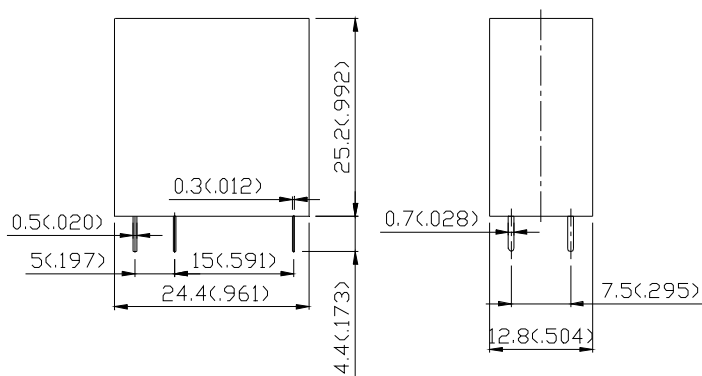


### Life Curves

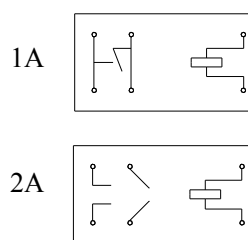


## OUTLINE DIMENSIONS

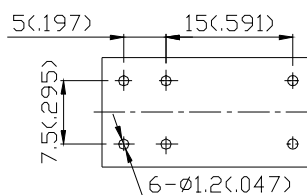
### Dimensions



### Internal Connections (Bottom View)



### Drilling Plan (Bottom View)



REMARK: Tolerance of outline dimensions:  $\pm 0.2(.008)$

UNIT: mm (inch)