



981 Series Relay

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 Arrangement1 Form A (SPST-NO)
.....2 Form A (DPST-NO)
- Max. Switching Power
 - 1 Form A.....4432VA 480W
 - 2 Form A1385VA 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 A5A/277VAC, 8A/125VAC ,5A/30VDC
- Inductive Load (Cos ϕ =0.4, L/R=7ms)
 - 1 Form A8A/250VAC , 8A/30VDC
 - 2 Form A.....2A/250VAC ,2A/30VDC
- TV Rating
 - 1 Form A.....TV-8
 - 2 Form A.....TV-3
- Contact MaterialAg Alloy

CHARACTERISTICS

- Electrical Life..... 1×10^5
- Mechanical Life..... 1×10^7
- Initial Insulation Resistance.....Min. 100M Ω 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 A5000VAC
- (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°C ~ +65°C

- Relative Humidity.....85% at 40°C

- 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

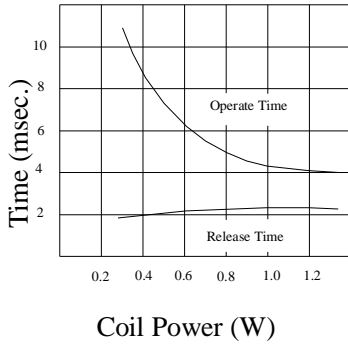
COIL RATINGS (at 20°C)

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

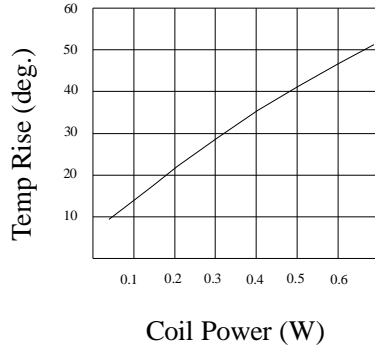
* Max Continuous Voltage at 20°C: 110% of Coil Nominal Voltage.

981-1A Referential Data

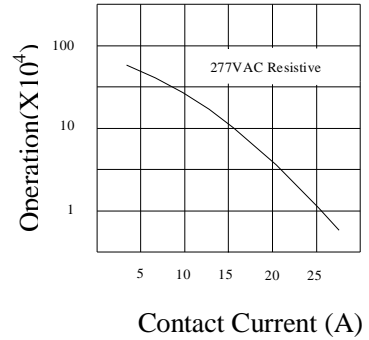
Timing



Coil Temperature Rise

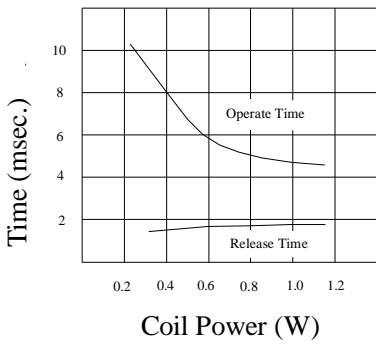


Life Curves

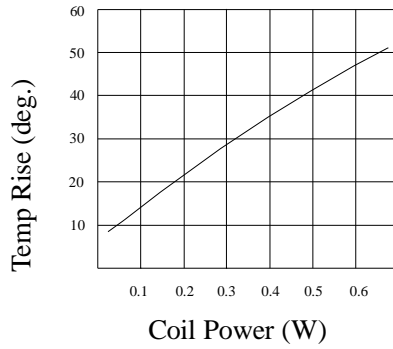


981-2A Referential Data

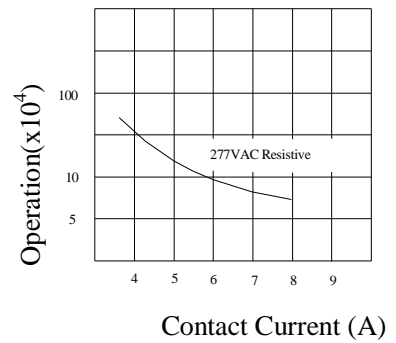
Timing



Coil Temperature Rise

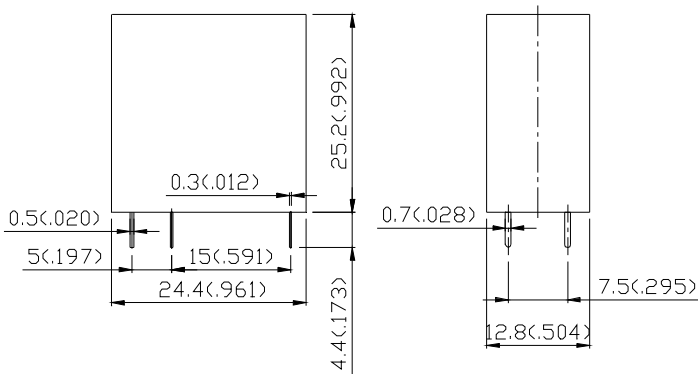


Life Curves

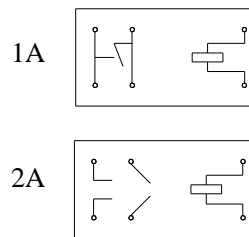


OUTLINE DIMENSIONS

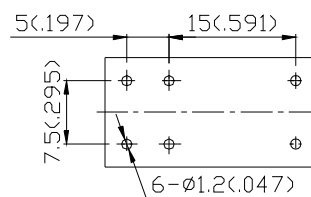
Dimensions



Internal Connections (Bottom View)



Drilling Plan (Bottom View)



REMARK: Tolerance of outline dimensions: ±0.2 (±0.008)

UNIT: mm (inch)