

INDUSTRIAL RELAYS

The RC Series has high sensitivity 540mW. This WPI industrial relay also has an insulation distance of 8mm and a dielectric strength of 5000VAC.

UL & CUL File #E223388

FEATURES

1. Standard type & High sensitivity type available.
2. UL Class F (155°C) coil insulation type available.
3. TV Rated (TV-3, TV-5 or TV-8) available.
4. Heavy current up to 20Amps.
5. Insulation distance: 8mm.
6. Dielectric strength: 5,000 VAC.
7. High sensitivity in small package.
8. Nominal power 540mW.
9. Operating power 300mW.

ORDERING INFORMATION

RC 1A - 12 D S T F P
(1) (2) (3) (4) (5) (6) (7) (8)

(1) Basic Designation
RC = RC Series

(2) Contact Arrangement
1A = 1 Form A (SPST-NO)
1B = 1 Form B (SPST-NC)
1C = 1 Form C (SPDT)
2A = 2 Form A (DPST-NO)
2B = 2 Form B (DPST-NC)
2C = 2 Form C (DPDT)

(3) Coil Voltage
DC = 3~110V
AC = 6~220V

(4) Coil Type
D = DC
A = AC

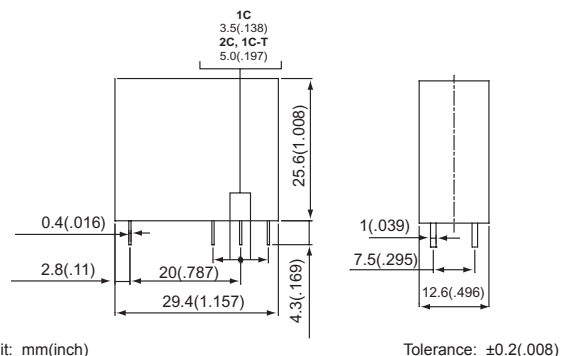
(5) Enclosure
Nil = Unsealed
S = Sealed

(6) Capacity
Nil = Standard
T = High Current

(7) Insulation
Nil = Class B
F = Class F

(8) RoHS Compliance
P = RoHS
Nil = Standard

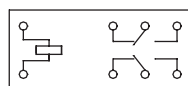
DIMENSIONS



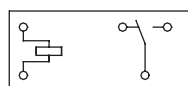
SCHEMATICS

(bottom view)

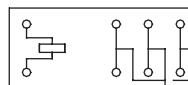
2C



1C

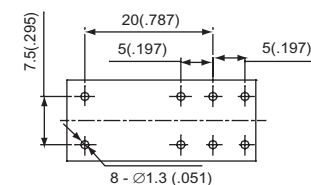
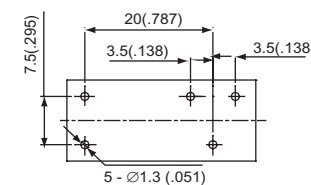
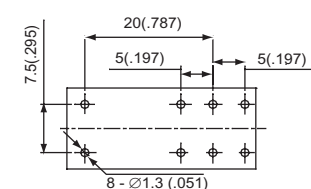


1C-T



PCB LAYOUT

(bottom view)



Unit: mm(inch)

COIL RATINGS (AT 20°C)

Coil Type	Coil Nominal Voltage (V)	Coil Resistance ($\Omega \pm 10\%$)	Pick-Up Voltage (V) ≤	Drop-Out Voltage (V) ≥	Nominal Current (mA)
DC	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	10.9
AC	100/110	18860	75	10	5.3
	6	16.5	4.8	1.8	-
	12	63	9.6	3.6	-
	24	250	19.2	7.2	-
	110/120	5600	88	33	-

* Max continuous Voltage at 20°C: 130% of Coil Nominal Voltage.

CONTACT RATINGS

Contact Arrangement	RC High Current (T)	RC	RC	RC
	1A, 1B, 1C	1A, 1B, 1C	2A	2B, 2C
Max. Switching Power	4000VA 600W	3000VA 480W	1750VA 210W	1250VA 150W
Mac. Switching Voltage	250VAC 48VDC	250VAC 48VDC	250VAC 30VDC	250VAC 30VDC
Max. Switching Current	20A	12A	7A	5A
Contact Resistance	≤100mΩ	≤100mΩ	≤100mΩ	≤100mΩ
Resistive Load (Cos φ =1)	16A / 250VAC 20A / 30VDC 20A / 125VAC 10A / 48VDC	12A / 250VAC 12A / 30VDC 10A / 48VDC	7A / 250VAC 7A / 30VDC	5A / 250VAC 5A / 30VDC
Inductive Load (Cos φ = 0.4 L/R = 7ms)	8A / 250VAC 8A / 30VDC	5A / 250VAC 5A / 30VDC	2A / 250VAC 2A / 30VDC	2A / 250VAC 2A / 30VDC
TV Rating	TV-8(1A-T)	TV-5(1A)	TV-3	-
Contact Material	silver alloy	silver alloy	silver alloy	silver alloy

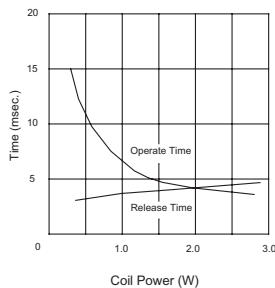
CHARACTERISTICS

Electrical Life	1 x 10 ⁵
Mechanical Life	1 x 10 ⁷
Initial Insulation Resistance	Min. 100MΩ 500VDC
Contact Resistance (Initial)	≤100mΩ
Operate Time	≤15ms
Release Time	≤8ms
Initial Dielectric Strength	50/60Hz 1000VAC 1 min. (between open contact) 50/60Hz 5000VAC 1 min. (between contacts and coils) 50/60Hz 2500VAC 1 min. (between contact sets)
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: 10G(6ms)
Ambient Temperature	-40°C ~ +80°C
Relative Humidity	85% at 40°C
Unit Weight	Approx. 17g

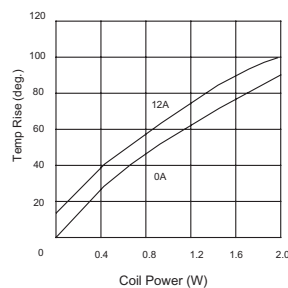
REFERENCE DATA

RC1A, RC1B, RC1C

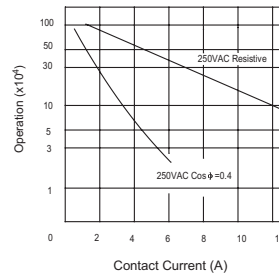
Timing



Coil Temperature Rise

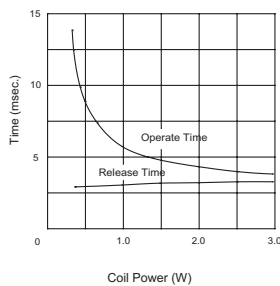


Life Curves

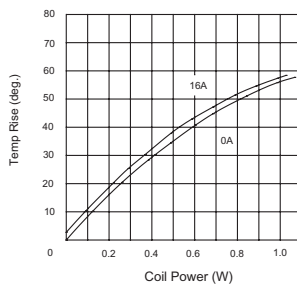


High Current (T) RC1A, RC1B, RC1C

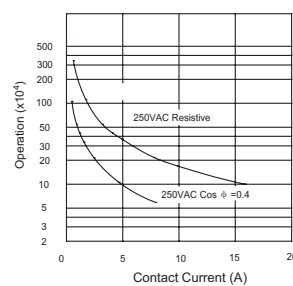
Timing



Coil Temperature Rise

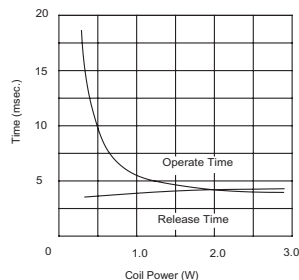


Life Curves

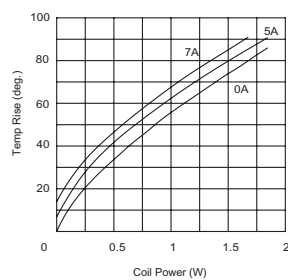


RC2A, RC2B, RC2C

Timing



Coil Temperature Rise



Life Curves

