SPECIFICATIONS

RC SERIES PC BOARD RELAY

TYPE: RC1V-△ - D□

Contact configuration

Contact capacity

Coil rated voltage

1. Applicable standard
   IEC61810-1
   EN61810-1 (TÜV SÜD Approval)
   UL508 (c-UL Recognition)
   CSA C22.2 No.14 (c-UL Approval)
   CQC GB/T21711.1, GB/T15092.1, GB/T15092.101

2. Operating conditions
   (1) Operating temperature
       -40 to +85°C (no freezing)
   (2) Operating humidity
       5 to 85%RH (no condensation)
   (3) Storage temperature
       -40 to +85°C (no freezing)
   (4) Storage humidity
       5 to 85%RH (no condensation)

3. Ratings
   3.1 Rated insulation voltage
       250V

   3.2 Coil rating (at 20°C)
       (1) Rated voltage (DC) - (□)
       5V: 81mA, 33mA, 17mA
       12V: 62Ω, 360Ω, 1440Ω
       24V: 12.3V, 29.4V, 58.8V
       48V: 110V, 4mA, 28800Ω
       (2) Rated current (approx.)
       5V: 81mA, 33mA, 17mA
       12V: 62Ω, 360Ω, 1440Ω
       24V: 12.3V, 29.4V, 58.8V
       48V: 110V, 4mA, 28800Ω
       (3) Coil resistance (±10%)
       5V: 81mA, 33mA, 17mA
       12V: 62Ω, 360Ω, 1440Ω
       24V: 12.3V, 29.4V, 58.8V
       48V: 110V, 4mA, 28800Ω
       (4) Maximum allowable voltage
       5V: 81mA, 33mA, 17mA
       12V: 62Ω, 360Ω, 1440Ω
       24V: 12.3V, 29.4V, 58.8V
       48V: 110V, 4mA, 28800Ω

   (5) Minimum pickup voltage (initial value)
       70% maximum
   (6) Dropout voltage (initial value)
       10% minimum
   (7) Power consumption (approx.)
       5~24V DC: 400mW
       48V DC: 430mW
       110V DC: 420mW

3.3 Switching ratings
   (1) Contact ratings
       (a) Allowable switching power
       Standard: Resistive load 3000VA AC, 288W DC
       High capacity: Resistive load 4000VA AC, 384W DC
   (b) Rated load
       | Voltage | Resistive load |
       |---------|---------------|
       | Standard | 250VAC, 24V DC | 12A |
       | High capacity | 250VAC, 24V DC | 16A |

   (2) Allowable contact current
       Standard: 14A, High capacity: 20A
       When the maximum current flow exceeds 10A, take into consideration the heat generated by the PC board wiring. Check the operation using the actual load.
(3) Allowable contact voltage  440V AC, 330V DC
(4) Minimum applicable load (reference value)  5V DC • 100mA

4. Constructions
(1) Outside view  See attached sheet
(2) Degree of protection  Flux-resistant type (RTII)
(3) Contact configuration — (◊)  1a(A), 1c(C)
(4) Contact capacity — (△)  Standard (blank), High capacity (H)
(5) Contact material  AgSnO2
(6) Terminal style  PCB terminal
(7) Weight (approx.)  13g

5. Characteristics
(1) Contact resistance  100mΩ maximum
(Note: Measured using 6V DC, 1A voltage drop method.)
(2) Operate time  15 ms max. (at the rated voltage)
(3) Release time  5 ms max. (at the rated voltage)
(4) Insulation resistance  1000MΩ minimum (measured with a 500V DC megger)
(5) Impulse voltage  10,000V (impulse wave form 1.2 × 50 μ s)
(6) Dielectric strength
   (a) Between contact circuit and coil  5000V AC for 1min.
   (b) Between contacts of the same pole  1000V AC for 1min.
(7) Vibration resistance
   (a) Operating extremes  Frequency 10 to 55Hz, Amplitude 0.35mm
   (b) Damage limits  Frequency 10 to 55Hz, Amplitude 0.75mm
(8) Shock resistance
   (a) Operating extremes  100 m/s²
   (b) Damage limits  1000 m/s²

6. Life
(1) Electrical life (rated load)
   (a) Standard  100,000 operations min. (250V AC/24V DC, 12A)
   (b) High capacity  RC1V-AH: 100,000 operations min. (250V AC/24V DC • 16A)
                    RC1V-CH: 50,000 operations min. (250V AC • 16A)
                    30,000 operations min. (24V DC • 16A)
                    (Operating frequency 600 times/hour)
(2) Mechanical life (without load)
   □ Various Characteristic Charts (Reference)
   ◇ Electric life curves
Maximum operating frequency (Electric life is not satisfied)

Operating range

Coil temperature rise