

# RET SERIES

## ORDER CODE

RET-12-12-A

C:1c  
A:1a  
B:1b

12:12A  
15:15A

COIL VOLTAGE

TYPE

03:DC 3V  
05:DC 5V  
06:DC 6V  
09:DC 9V  
12:DC 12V  
18:DC 18V  
24:DC 24V  
48:DC 48V



### Main Features:

- UL, CUR & TUV safety approval.
- TV-5 rating available.
- High performance and Low profile.
- Epoxy seal type and flux free.
- Satisfying all requirements for use in car and household electric appliances.

## COIL RATING (at 20°C)

| Nominal Voltage (VDC) | Coil resistance (Ω) (+/-10%) | Power Consumpt -10N (W) | Nominal Current (mA)(+/-10%) | Pull In Voltage (VDC) | Drop Out Voltage (VDC) | Max Allowable Voltage (VDC) |
|-----------------------|------------------------------|-------------------------|------------------------------|-----------------------|------------------------|-----------------------------|
| 3V                    | 25Ω                          | 0.36W                   | 120.0mA                      | 75% Max.              | 10% Min.               | 110%                        |
| 5V                    | 69Ω                          |                         | 73.0mA                       |                       |                        |                             |
| 6V                    | 100Ω                         |                         | 60.0mA                       |                       |                        |                             |
| 9V                    | 225Ω                         |                         | 40.0mA                       |                       |                        |                             |
| 12V                   | 400Ω                         |                         | 30.0mA                       |                       |                        |                             |
| 18V                   | 900Ω                         |                         | 20.0mA                       |                       |                        |                             |
| 24V                   | 1600Ω                        |                         | 15.0mA                       |                       |                        |                             |
| 48V                   | 6400Ω                        |                         | 7.5mA                        |                       |                        |                             |

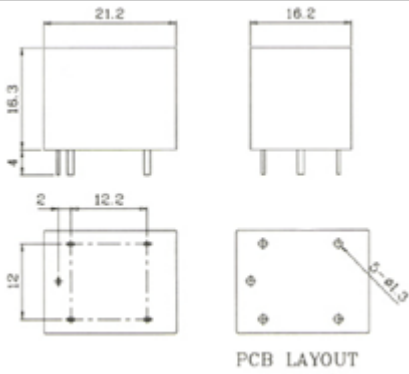
## PERFORMANCE (at initial value)

| Item \ Type                                                      | 12A                                                                                           | 15A |
|------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-----|
| Contact Resistance                                               | 50mΩ Max (initial)                                                                            |     |
| Operate Time                                                     | 15m sec Max.                                                                                  |     |
| Release Time                                                     | 5m sec Max.                                                                                   |     |
| Dielectric Strength<br>between coil & contact<br>between contact | Ac1500V (00/60Hz 1min.)<br>Ac750V (50/600Hz 1min.)                                            |     |
| Insulation Resistance                                            | 100MΩ Min. (DC500V)                                                                           |     |
| Operating Ambient Temperature                                    | -30°C ~ +60°C (No freezing)                                                                   |     |
| Vibration Resistance                                             | Operating Extremes: 10 ~ 55Hz, Amplitude: 1.0mm<br>Damage Limits: 10 ~55Mhz, Amplitude: 1.0mm |     |
| Shock Resistance                                                 | Operating Estremes: 10G<br>Damage Limits: 100G                                                |     |
| Life Expectancy<br>Mechanically                                  | 10,000,000 ops . Min. (1800 ops./h)                                                           |     |
| Electrically                                                     | 100,000 ops. Min. (1200 ops./h)                                                               |     |
| Weight                                                           | 10g (about)                                                                                   |     |

CONTACT RATING

| Item \ Type             | 12A                                   | 15A                                     |
|-------------------------|---------------------------------------|-----------------------------------------|
| Rated Carrying Current  | AC 120V 12A<br>AC 250V 7A<br>DC30V 7A | AC 120V 15A<br>AC 250V 10A<br>DC30V 10A |
| Max. Allowable Current  | 12A                                   | 15A                                     |
| Max. Allowable Voltage  | AC 250V<br>DC 30V                     | AC 250V<br>DC 30V                       |
| Max Current (continual) | 12A                                   | 15A                                     |
| Min. Load               | DC 10V 10mA                           |                                         |
| Contact Material        | Ag Alloy                              |                                         |

DIMENSIONS (Unit: mm)



WIRING DIAGRAMS (Bottom View)

