



# TR99

## MAIN FEATURES

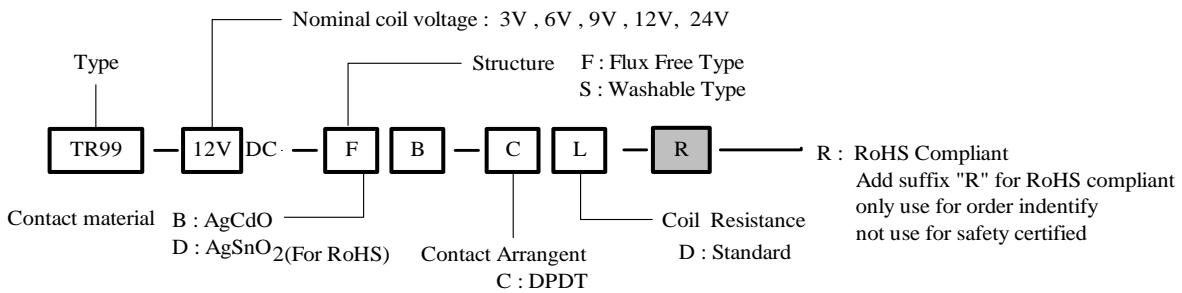
- Small size and sensitive operation.
- Low coil power consumption.
- PCB mounting.
- Switching capacity from 1A to 5A.
- Sealed type available.



## APPLICATIONS

- Audio equipment.
- Communication equipment.
- Remote control.
- Acoustic controlled toys.

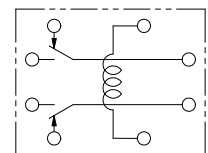
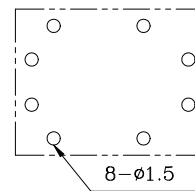
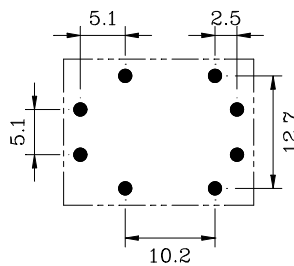
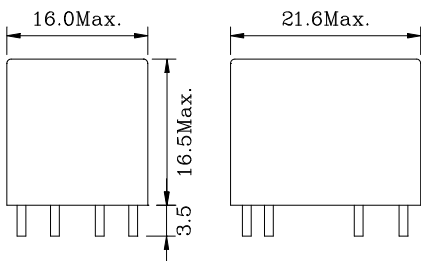
## ORDERING INFORMATION



## DIMENSION (unit:mm)

## DRILLING (unit:mm)

## WIRING DIAGRAM



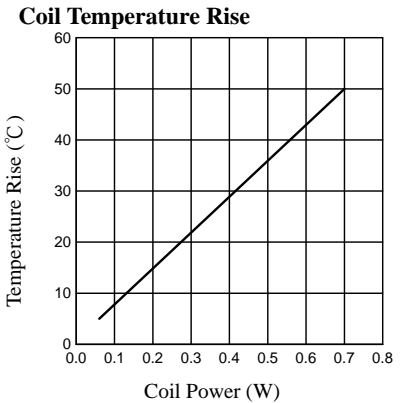
## COIL DATA CHART (AT20°C)

| Coil Sensitivity | Coil Voltage Code | Nominal Voltage (VDC) | Nominal Current (mA) | Coil Resistance ( $\Omega$ ) $\pm 10\%$ | Power Consumption (W) | Pull-In Voltage (VDC) | Drop-Out Voltage (VDC) | Max-Allowable Voltage (VDC) |
|------------------|-------------------|-----------------------|----------------------|---|-----------------------|-----------------------|------------------------|-----------------------------|
| TR99 (Standard)  | 03                | 3                     | 150                  | 20                                      | abt. 0.45W            | 75% Max.              | 10% Min.               | 110%                        |
|                  | 06                | 6                     | 75                   | 80                                      |                       |                       |                        |                             |
|                  | 09                | 9                     | 50                   | 180                                     |                       |                       |                        |                             |
|                  | 12                | 12                    | 37.5                 | 320                                     |                       |                       |                        |                             |
|                  | 24                | 24                    | 18.7                 | 1280                                    |                       |                       |                        |                             |

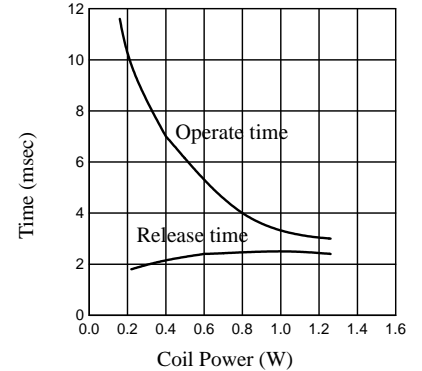
## CONTACT RATING

| Item                                       | Type | TR99                  |
|--|------|-----------------------|
| Contact Capacity                           |      | 5A 277VAC             |
| Resistive Load ( $\cos\Phi=1$ )            |      | 5A 28VDC              |
| Inductive Load ( $\cos\Phi=0.4$ L/R=7msec) |      | 2A 110VAC<br>2A 28VDC |
| Rated Carrying Current                     |      | 5A                    |
| Max. Allowable Voltage                     |      | 110VAC 28VDC          |
| Max. Allowable Current                     |      | 5A                    |
| Max. Allowable Power Force                 |      | 550VA 140W            |
| Referenced Min. Applicable Load            |      | 5VDC 110mA            |
| Contact Material                           |      | Ag Alloy              |

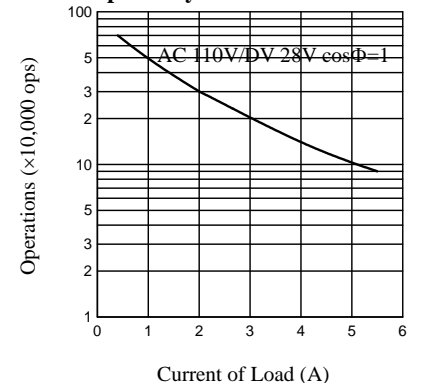
## REFERENCE DATA



### Operate Time



### Life Expectancy



## PERFORMANCE (at initial value)

| Item                          | Type | TR99   |
|-------------------------------|------|--|
| Contact Resistance            |      | 100m $\Omega$ Max.   |
| Operation Time                |      | 15msec Max.  |
| Release Time                  |      | 5msec Max.   |
| Dielectric Strength           |      | 1000VAC 50/60HZ (1 minute)<br>750VAC 50/60HZ (1 minute)  |
| Surge Resistiveness           |      | 1500V (between coil & contact 1 $\times$ 40 usec)  |
| Insulation Resistance         |      | 100 M $\Omega$ Min. (500VDC)   |
| Max. ON/OFF Switching         |      | 300 operation/min<br>30 operation/min  |
| Operating Ambient Temperature |      | -30°C to +60°C<br>(No water condensation and no water drop)  |
| Operating Humidity            |      | 45% to 85%RH   |
| Coil Temperature Rise         |      | 35 deg. Max. (at rated coil voltage)   |
| Vibration                     |      | 10 to 55Hz Double Amplitude 1.5mm<br>10 to 55Hz Double Amplitude 1.5mm   |
| Shock                         |      | 100G Min.<br>10G Min.  |
| Life Expectancy               |      | 10 $\times$ 10 <sup>6</sup> ops. Min. (no load)<br>10 $\times$ 10 <sup>4</sup> ops. Min. (at rated coil voltage) |
| Weight                        |      | abt. 12grs.  |

This datasheet for reference and subject to change without notice. Please double check final specification with Tai-Shing.