



# TRGQ



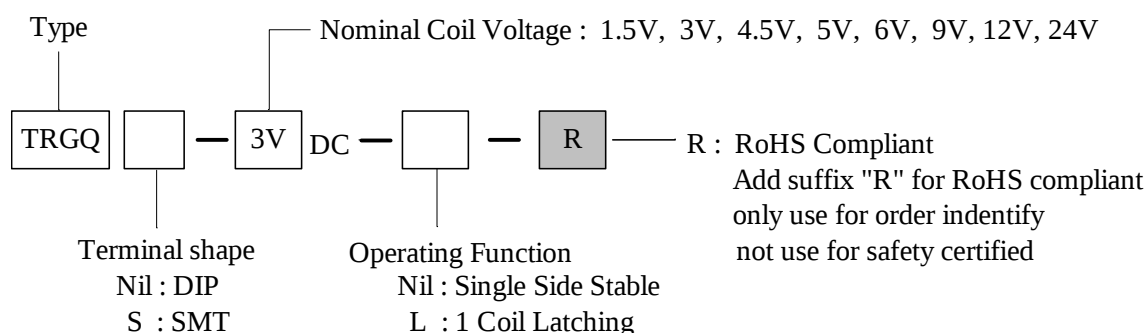
## MAIN FEATURES

- Offers excellent board space savings
- Surge withstand voltage up to 2500V, meets FCC Part 68 and Telecordia
- Meets EN60950/EN41003
- SMT and DIP types available
- High contact capacity 2A 30VDC
- Low power consumption
- Single side stable and latching type available

## APPLICATIONS

- Application for Telecommunication Equipment, Office Equipment, Security Alarm Systems, Measuring instruments, Medical Monitoring Equipment, Audio Visual Equipment, Flight Simulator, Sensor Control.

## ORDERING INFORMATION

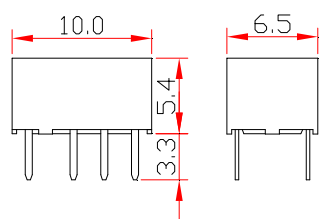


## DIMENSION (unit:mm)

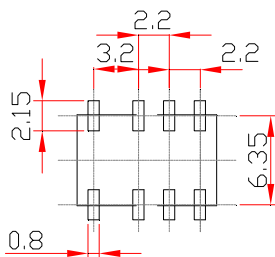
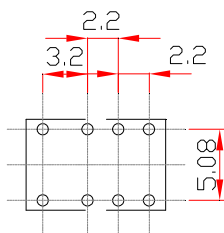
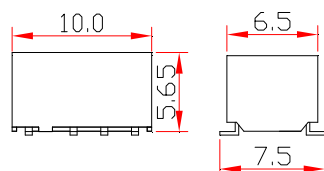
## DRILLING (unit:mm)

## WIRING DIAGRAM

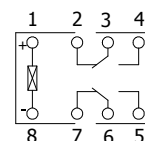
### DIP TYPE



### SMT TYPE

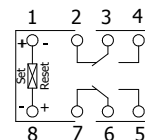


### Single Side Stable



No energized condition

### 1 Coil Latching



reset condition

## COIL DATA CHART (AT20°C)

| Coil Sensitivity   | Coil Voltage (VDC) Rated | Nominal Current (mA) | Coil Resistance ( $\Omega$ ) $\pm 10\%$ | Coil Power (W) | Pickup voltage (VDC) Max. (75% of rated voltage) | Release voltage (VDC) Min. (10% of rated voltage) | Max Allowable Voltage (VDC) |
|--------------------|--------------------------|----------------------|-----------------------------------------|----------------|--------------------------------------------------|---------------------------------------------------|-----------------------------|
| Single Side Stable | 1.5                      | 93.8                 | 16                                      | 0.14           | 1.13                                             | 0.15                                              | 2.2                         |
|                    | 3                        | 46.7                 | 64.3                                    | 0.14           | 2.25                                             | 0.3                                               | 4.5                         |
|                    | 4.5                      | 31.0                 | 145                                     | 0.14           | 3.38                                             | 0.45                                              | 6.7                         |
|                    | 5                        | 28.1                 | 178                                     | 0.14           | 3.75                                             | 0.5                                               | 7.5                         |
|                    | 6                        | 23.3                 | 257                                     | 0.14           | 4.5                                              | 0.6                                               | 9.0                         |
|                    | 9                        | 15.5                 | 579                                     | 0.14           | 6.75                                             | 0.9                                               | 13.5                        |
|                    | 12                       | 11.7                 | 1028                                    | 0.14           | 9.0                                              | 1.2                                               | 18.0                        |
| 1 Coil Latching    | 24                       | 8.3                  | 2880                                    | 0.20           | 18.0                                             | 2.4                                               | 36.0                        |
|                    | 1.5                      | 66.7                 | 22.5                                    | 0.10           | 1.13                                             | 1.13                                              | 3.0                         |
|                    | 3                        | 33.3                 | 90                                      | 0.10           | 2.25                                             | 2.25                                              | 6.0                         |
|                    | 4.5                      | 22.2                 | 203                                     | 0.10           | 3.38                                             | 3.38                                              | 9.0                         |
|                    | 5                        | 20.0                 | 250                                     | 0.10           | 3.75                                             | 3.75                                              | 10.0                        |
|                    | 6                        | 16.7                 | 360                                     | 0.10           | 4.5                                              | 4.5                                               | 12.0                        |
|                    | 9                        | 11.1                 | 810                                     | 0.10           | 6.75                                             | 6.75                                              | 18.0                        |
|                    | 12                       | 8.3                  | 1440                                    | 0.10           | 9.0                                              | 9.0                                               | 24.0                        |
|                    | 24                       | 8.3                  | 2880                                    | 0.20           | 18.0                                             | 18.0                                              | 36.0                        |

## CONTACT RATING

| Item                                               | Type | TRGQ                        |
|----------------------------------------------------|------|-----------------------------|
| Contact Capacity Resistive Load ( $\cos\Phi = 1$ ) |      | 2A / 30VDC<br>0.5A / 125VAC |
| Max. Switching Voltage                             |      | 220VDC/250VAC               |
| Max. Switching Current                             |      | 2A                          |
| Max. Switching Power Force                         |      | 60W, 62.5VA                 |
| Referenced Min. Applicable Load                    |      | 10mV 10uA                   |
| Contact Material                                   |      | Ag Alloy                    |

## PERFORMANCE (at initial value)

| Item                              | Type | TRGQ                                                                                                    |
|-----------------------------------|------|---------------------------------------------------------------------------------------------------------|
| Contact Resistance                |      | 70m $\Omega$                                                                                            |
| Operation Time                    |      | Approx. 3msec                                                                                           |
| Release Time                      |      | Approx. 3msec                                                                                           |
| Dielectric Strength               |      |                                                                                                         |
| Between coil & contacts           |      | 1500VAC 1 min.                                                                                          |
| Between open contacts             |      | 1000VAC 1 min.                                                                                          |
| Between Contact sets              |      | 1000VAC 1 min.                                                                                          |
| Surge Withstand Voltage           |      |                                                                                                         |
| Between open Contacts(10x160us)   |      | 1500V (FCC part 68)                                                                                     |
| Between coil & Contacts( 2x 10us) |      | 2500V (Telecordia)                                                                                      |
| Shock Resistance                  |      |                                                                                                         |
| Functional                        |      | 735m/s <sup>2</sup>                                                                                     |
| Destructive                       |      | 980m/s <sup>2</sup>                                                                                     |
| Vibration Resistance              |      |                                                                                                         |
| Functional                        |      | 3.3mm D.A. 10 to 55Hz                                                                                   |
| Destructive                       |      | 5.0mm D.A. 10 to 55Hz                                                                                   |
| Temperature Range                 |      | -40°C to 85°C                                                                                           |
| Humidity                          |      | 98% RH, 40°C                                                                                            |
| Insulation Resistance             |      | 1000 M $\Omega$ Min. (at 500VDC)                                                                        |
| Life Expectancy                   |      |                                                                                                         |
| Electrically                      |      | 1 $\times$ 10 <sup>5</sup> ops. Min. ( 2A/30VDC)<br>1 $\times$ 10 <sup>5</sup> ops. Min. ( 0.5A/125VAC) |
| Mechanically                      |      | 1 $\times$ 10 <sup>8</sup> ops. Min.                                                                    |
| Weight                            |      | 0.8g                                                                                                    |
| UL                                |      | E156521                                                                                                 |

This datasheet for reference and subject to change without notice. Please double check final specification with Tai-Shing.  
(1420AA09VOL01)