



## MAIN FEATURE

1. Miniature size with lightweight.
2. Low power consumption with various types of coil sensitivity for design flexibility.
3. Plastic sealed type available for washing protective.
4. Wide operation coil voltage range.
5. Comply with RoHS and REACH regulations.

## CONTACT RATING

| Load Type                  | ST (D)     | ST (T)     | ST (L)     |
|----------------------------|------------|------------|------------|
| Rated Load (Resistive)     | 2A 120VAC  | 2A 120VAC  | 2A 120VAC  |
|                            | 2A 24VDC   | 2A 24VDC   | 2A 24VDC   |
| Rated Carrying Current     | 2A         | 2A         | 2A         |
| Max. Allowable Voltage     | AC 120V    | AC 120V    | AC 120V    |
|                            | DC 60V     | DC 60V     | DC 60V     |
| Max. Allowable Current     | 2A         | 2A         | 2A         |
| Max. Allowable Power Force | 240VA      | 240VA      | 240VA      |
|                            | 48W        | 48W        | 48W        |
| Min. Switching Load        | DC 5V, 1mA | DC 5V, 1mA | DC 5V, 1mA |
| Contact Material           | Ag +Au     | Ag +Au     | Ag +Au     |
| Contact Form               | SPDT       | SPDT       | SPDT       |

## APPLICATION

Telecommunication, Office Equipment and Industrial Control Application

## PERFORMANCE (AT INITIAL VALUE)

- Contact Resistance ..... 100mΩ max.@100mA, 6VDC
- Operate Time.....5 mSec. Max.
- Release Time .....3 mSec. Max.
- Dielectric Strength:
  - Between Coil & Contact..... 1,000VAC at 50/60 Hz for one minute
  - Between Contacts .....400VAC at 50/60 Hz for one minute
- Surge Strength ..... 1,500V (between Coil & Contact 1.2x50μSec.)
- Insulation Resistance..... 100 MegaΩ Min. at 500VDC
- Max. On/Off Switching:
  - Electrical .....6 Cycles per Minute
  - Mechanical.....300 Cycles per Minute

- Temperature Range ..... -30~+70°C
- Humidity Range ..... 35~85% RH.
- Coil Temperature Rise ..... 40°C Max.
- Vibration:
  - Destruction ..... 10 to 55 to 10 Hz,0.75 mm single amplitude (1.5mm double amplitude)
  - Malfunction ..... 10 to 55 to 10 Hz,0.75 mm single amplitude (1.5mm double amplitude)
- Shock:
  - Destruction ..... 1,000 m/S<sup>2</sup>
  - Malfunction ..... 100 m/S<sup>2</sup>
- Life Expectancy:
  - Mechanical ..... 10<sup>7</sup> Operations at No Load condition
  - Electrical ..... 10<sup>5</sup> Operations at Rated Resistive Load
- Weight ..... About 2g

## SAFETY STANDARD & FILE NUMBER

- UL & C-UL..... E141060
- TÜV..... R50199701

COIL SPECIFICATION (AT 20°C)

| Coil Sensitivity | Nominal Voltage (VDC) | Nominal Current (mA) | Coil Resistance ( $\Omega \pm 10\%$ ) | Power Consumption (W) | Pull-In Voltage (VDC) | Drop-Out Voltage (VDC) | Maximum Allowable Voltage (VDC) |
|------------------|-----------------------|----------------------|---------------------------------------|-----------------------|-----------------------|------------------------|---------------------------------|
| ST-D             | 3                     | 120                  | 25                                    | Abt.0.36              | 75%<br>Maximum        | 5%<br>Minimum          | 130%                            |
|                  | 5                     | 71.4                 | 70                                    |                       |                       |                        |                                 |
|                  | 6                     | 60                   | 100                                   |                       |                       |                        |                                 |
|                  | 9                     | 40                   | 225                                   |                       |                       |                        |                                 |
|                  | 12                    | 30                   | 400                                   |                       |                       |                        |                                 |
| ST-T             | 24                    | 15                   | 1,600                                 | Abt.0.2               | 80%<br>Maximum        |                        |                                 |
|                  | 3                     | 67                   | 45                                    |                       |                       |                        |                                 |
|                  | 5                     | 40                   | 125                                   |                       |                       |                        |                                 |
|                  | 6                     | 33.3                 | 180                                   |                       |                       |                        |                                 |
|                  | 9                     | 22.5                 | 400                                   |                       |                       |                        |                                 |
| ST-L             | 12                    | 16.7                 | 720                                   | Abt.0.15              |                       |                        |                                 |
|                  | 24                    | 8.3                  | 2,880                                 |                       |                       |                        |                                 |
|                  | 3                     | 50                   | 60                                    |                       |                       |                        |                                 |
|                  | 5                     | 29.9                 | 167                                   |                       |                       |                        |                                 |
|                  | 6                     | 25.0                 | 240                                   |                       |                       |                        |                                 |
|                  | 9                     | 16.7                 | 540                                   |                       |                       |                        |                                 |
|                  | 12                    | 12.5                 | 960                                   |                       |                       |                        |                                 |
|                  | 24                    | 6.3                  | 3,800                                 |                       |                       |                        |                                 |

ORDERING INFORMATION

**ST - SH - 1 12 D**

**Coil Sensitivity:** D: Standard DC  
T: Medium DC  
L: High DC

**Coil Voltage:** 03: 3V, 05: 5V, 06: 6V, 09: 9V, 12: 12V, 24: 24V

**Number of Pole:** 1: One Pole

**Type of Sealing:** SS: RT II Flux Proofed  
SH: RT III Wash Tight

**1 Pole**

CLASSIFICATION

| Model            | ST          |            |            |
|------------------|-------------|------------|------------|
|                  | Standard DC | Medium DC  | High DC    |
| Coil Sensitivity | Standard DC | Medium DC  | High DC    |
| Flux Proofed     | ST-SS-1□□D  | ST-SS-1□□T | ST-SS-1□□L |
| Wash Tight       | ST-SH-1□□D  | ST-SH-1□□T | ST-SH-1□□L |

DIMENSION ( $\leq 5\text{mm} \pm 0.2\text{mm}$ ,  $> 5\text{mm} \pm 0.3\text{mm}$ , the tolerance of PCB thru hole:  $+0.1\text{mm}$ )

