

# SONGLE RELAY

|                                                                                   |               |            |
|-----------------------------------------------------------------------------------|---------------|------------|
|  | RELAY ISO9002 | <b>SMI</b> |
|-----------------------------------------------------------------------------------|---------------|------------|



## 1. MAIN FEATURES

- Slim type and small occupying space can offer high density P.C.B. technique.
- Low coil power consumption type and general coil power consumption are prepared to comply with user's wide selections.
- Employment of suitable plastic materials to be applied to high temperature and various chemical solutions.
- Complete protective construction from dust and soldering flux. If required, plastic epoxy resin sealed type is available for washing procedure.

## 2. APPLICATIONS

- Cooking appliances, air conditioners, audio equipment, domestic appliances, etc.

## 3. ORDERING INFORMATION

| SMI            | XX VDC                    | S                 | L                | C            |
|----------------|---------------------------|-------------------|------------------|--------------|
| Model of relay | Nominal coil voltage      | Structure         | Coil sensitivity | Contact form |
| SMI            | 05, 06, 09, 12, 24, 48VDC | S: Sealed type    | L: 0.54W         | A: 1 form A  |
|                |                           | F: Flux free type | D: 0.72W         | B: 1 form B  |
|                |                           |                   |                  | C: 1 form C  |

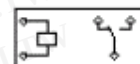
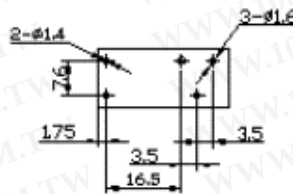
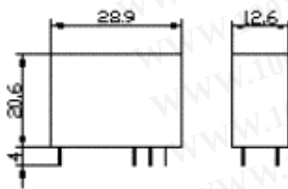
## 4. RATING

|     |                           |                  |
|-----|---------------------------|------------------|
| CCC | FILE NUMBER: CH0036746-99 | 10A/250VDC       |
| UL  | FILE NUMBER: E167996      | 10A/240VAC 30VDC |
| TUV | FILE NUMBER: R9933789     | 10A/240VAC 30VDC |

## 5. DIMENSION (unit:mm)

## DRILLING (unit:mm)

## WIRING DIAGRAM



勝特力材料 886-3-5753170  
 勝特力电子(上海) 86-21-34970699  
 勝特力电子(深圳) 86-755-83298787  
[Http://www.100y.com.tw](http://www.100y.com.tw)

## 6. 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) |
|------------------|-------------------|-----------------------|----------------------|-----------------------------------------|-----------------------|-----------------------|------------------------|-----------------------------|
| SMI0.72W         | 03                | 03                    | 240                  | 12.5                                    | abt. 0.72W            | 80% Max.              | 5% Min.                | 130% Max.                   |
|                  | 05                | 05                    | 138.9                | 36                                      |                       |                       |                        |                             |
|                  | 06                | 06                    | 120                  | 50                                      |                       |                       |                        |                             |
|                  | 09                | 09                    | 78.3                 | 115                                     |                       |                       |                        |                             |
|                  | 12                | 12                    | 60                   | 200                                     |                       |                       |                        |                             |
|                  | 24                | 24                    | 29.3                 | 820                                     |                       |                       |                        |                             |
| SMI0.54W         | 48                | 48                    | 14.5                 | 3300                                    | abt. 0.54W            | 80%Max.               | 5% Min.                | 130% Max.                   |
|                  | 03                | 03                    | 126.5                | 17                                      |                       |                       |                        |                             |
|                  | 05                | 05                    | 106.4                | 47                                      |                       |                       |                        |                             |
|                  | 06                | 06                    | 88                   | 68                                      |                       |                       |                        |                             |
|                  | 09                | 09                    | 58                   | 155                                     |                       |                       |                        |                             |
|                  | 12                | 12                    | 44.4                 | 270                                     |                       |                       |                        |                             |
|                  | 24                | 24                    | 21.8                 | 1100                                    |                       |                       |                        |                             |
|                  | 48                | 48                    | 10.9                 | 4400                                    |                       |                       |                        |                             |

## 7. CONTACT RATING

| Item                   | Arrangement | SMI-1pole                          |                                      |
|------------------------|-------------|------------------------------------|--------------------------------------|
| Rated load             |             | Resistive Load<br>( $\cos\phi=1$ ) | Inductive Load<br>( $\cos\phi=0.4$ ) |
|                        |             | 10A 250VAC<br>10A 30VDC            | 4A 250VAC<br>4A 30VDC                |
| Carrying current       |             | 10A                                |                                      |
| Max. switching voltage |             | 380VAC, 125VDC                     |                                      |
| Min. permissible load  |             | 5VDC 10mA                          |                                      |
| Contact material       |             | AgCdO                              |                                      |

## 9. USEFUL CURVES

## 8. PERFORMANCE (at initial value)

| Item                          | Type | SMI-1pole                                         |
|-------------------------------|------|---------------------------------------------------|
| Contact Resistance            |      | 100m $\Omega$ Max.                                |
| Operation Time                |      | 15msec Max.                                       |
| Release Time                  |      | 8msec Max.                                        |
| Dielectric Strength           |      |                                                   |
| Between coil & contact        |      | 5000VAC 50/60HZ (1 minute)                        |
| Between contacts              |      | 1000VAC 50/60HZ (1 minute)                        |
| Surge Resistiveness           |      | 1000V (between coil & contact 1 $\times$ 40 msec) |
| Insulation Resistance         |      | 100 M $\Omega$ Min. (500VDC)                      |
| Max. ON/OFF Switching         |      |                                                   |
| Mechanically                  |      | 300 operation/min                                 |
| Electrically                  |      | 30 operation/min                                  |
| Operating Ambient Temperature |      | -20°C to +55°C                                    |
| Operating Humidity            |      | 45 to 80% RH                                      |
| Coil Temperature Rise         |      | 45 deg. Max.<br>(at rated coil voltage)           |
| Vibration                     |      |                                                   |
| Endurance                     |      | 10 to 55Hz Double Amplitude 1.5mm                 |
| Error Operation               |      | 10 to 55Hz Double Amplitude 1.5mm                 |
| Shock                         |      |                                                   |
| Endurance                     |      | 100G Min.                                         |
| Error Operation               |      | 10G Min.                                          |
| Life Expectancy               |      |                                                   |
| Mechanically                  |      | 10 <sup>7</sup> operations. Min.                  |
| Electrically                  |      | 10 <sup>5</sup> operations. Min.                  |
| Weight                        |      | abt. 13grs.                                       |

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