



Patent: ZL 2010 2 0563196.2



### Main Feature

1. Small size (29x12.9x15.6 in mm) produces a switching capacity up to 12A for high density P.C.Board mounting technique.
2. The contact form construction is 1A/1B/1C
3. The Surge Resistance of BRT1 series is 10,000V
4. Sealing Construction (Free from dust and solder flux):  
BRT1-SS: Plastic Sealed Type.
5. The selection of plastic insulation material is designed for high temperature and provides better chemical solution performance.
6. RoHS Compliant.

### Application

Air Conditioning, Fridge, Washing Machine, etc Household Appliances

### Contact Rating

- Nominal Load(Resistive Load  $\cos \phi = 1$ )  
Contact Capacity  
BRT1-L/D/LM/DM.....12A at 250VAC
- Max. Allowable Current  
BRT1-L/D/LM/DM.....12A
- Max. Allowable Voltage  
BRT1-L/D/LM/DM.....AC250V
- Max. Allowable Power Force  
BRT1-L/D/LM/DM.....3,000VA
- Contact Material..... Ag Alloy
- Contact Form..... SPDT & SPST

### Performance (at Initial Value)

- Contact Resistance.....  $\leq 100m\Omega$  at 6VDC/1A
- Operate Time.....10ms. Max
- Release Time..... 5ms. Max
- Dielectric Strength:  
Between Coil & Contact.....5,000VAC at 50/60 Hz  
for one minute  
Between Contacts.....1,000VAC at 50/60 Hz  
for one minute
- Surge Resistance.....10,000V (between Coil  
& Contact 1.2x50  $\mu$ s)
- Insulation Resistance.....1,000 Mega  $\Omega$  Min. at  
500VDC

- Max. On/Off Switching:  
Electrical.....30 Ops per minute  
Mechanical.....300 Ops per minute
- Temperature Range..... - 40~85 $^{\circ}$ C
- Humidity Range.....5%~85% RH
- Coil Temperature Rise..... 35 $^{\circ}$ C Maximum
- Vibration:  
Endurance.....10 to 55 Hz dual  
amplitude width 1.5mm  
Error Operation.....10 to 55 Hz dual  
amplitude width 1.5mm
- Shock:  
Endurance..... 981m/s<sup>2</sup> Min  
Error Operation.....98.1m/s<sup>2</sup> Min
- Life Expectancy:  
Electrical.....10<sup>5</sup> Operations at  
Rated Resistive  
load  
Mechanical.....10<sup>7</sup> Operations at  
No load condition
- Weight.....about 13g

### Safety Standard & Its File Number

- UL.....E333244
- TUV.....R50209295
- CQC.....CQC10002042508

## Coil Specification (at 20 °C)

| Coil Sensitivity  | Nominal Voltage (VDC) | Nominal Current (mA) | Coil Resistance (Ω±8%) | Power Consumption (W) | Pull-In Voltage (VDC) | Drop-Out Voltage (VDC) | Maximum Allowable Voltage (VDC) |
|-------------------|-----------------------|----------------------|------------------------|-----------------------|-----------------------|------------------------|---------------------------------|
| BRT1-D<br>BRT1-DM | 5                     | 80.6                 | 62                     | Abt. 0.4              | 75%<br>Maximum        | 10%<br>Minimum         | 130%                            |
|                   | 6                     | 66.7                 | 90                     |                       |                       |                        |                                 |
|                   | 9                     | 44.6                 | 202                    |                       |                       |                        |                                 |
|                   | 12                    | 33.3                 | 360                    |                       |                       |                        |                                 |
|                   | 24                    | 16.7                 | 1440                   |                       |                       |                        |                                 |
|                   | 48                    | 8.7                  | 5520                   |                       |                       |                        |                                 |
| BRT1-L<br>BRT1-LM | 5                     | 50                   | 100                    | Abt. 0.25             |                       |                        |                                 |
|                   | 6                     | 41.7                 | 144                    |                       |                       |                        |                                 |
|                   | 9                     | 27.7                 | 325                    |                       |                       |                        |                                 |
|                   | 12                    | 20.8                 | 576                    |                       |                       |                        |                                 |
|                   | 24                    | 10.4                 | 2304                   |                       |                       |                        |                                 |
|                   | 48                    | 5.2                  | 9216                   |                       |                       |                        |                                 |

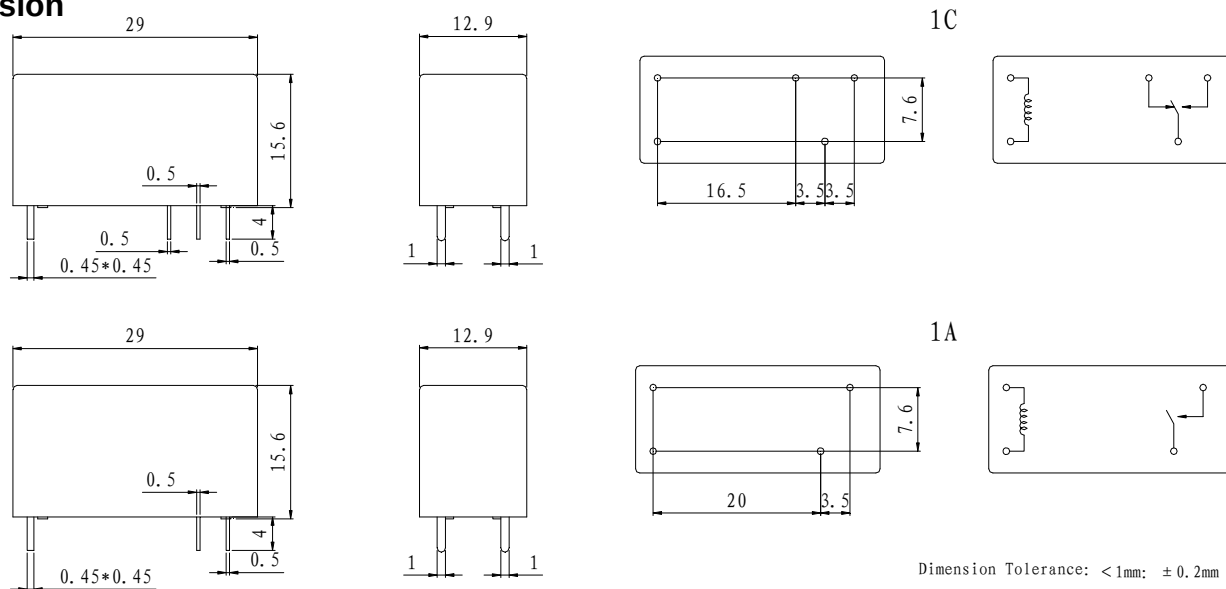
## Ordering Information

|             |          |           |          |          |           |          |          |                                                                           |
|-------------|----------|-----------|----------|----------|-----------|----------|----------|---------------------------------------------------------------------------|
| <b>BRT1</b> | <b>-</b> | <b>SS</b> | <b>-</b> | <b>1</b> | <b>12</b> | <b>D</b> | <b>M</b> |                                                                           |
|             |          |           |          |          |           |          |          | <b>Contact Form:</b> Nil:One form C<br>M:One form A<br>B:One form B       |
|             |          |           |          |          |           |          |          | <b>Coil Type:</b> D: Standard DC Coil<br>L: High Sensitivity DC Coil      |
|             |          |           |          |          |           |          |          | <b>Coil Voltage:</b> 03:3V, 05:5V, 06:6V, 09:9V<br>12:12V, 24:24V, 48:48V |
|             |          |           |          |          |           |          |          | <b>Number of Pole:</b> 1:One Pole                                         |
|             |          |           |          |          |           |          |          | <b>Type of Sealing:</b> SS:Half a seal                                    |
|             |          |           |          |          |           |          |          | <b>Type:</b> BRT1                                                         |

## Classification

| Model               | BRT1             |               |                          |               |
|---------------------|------------------|---------------|--------------------------|---------------|
| Coil Sensitivity    | Standard DC Coil |               | High Sensitivity DC Coil |               |
|                     | 1C               | 1A            | 1C                       | 1A            |
| Plastic Sealed Type | BRT1-SS-1□□D     | BRT1-SS-1□□DM | BRT1-SS-1□□L             | BRT1-SS-1□□LM |

## Dimension



Dimension Tolerance: < 1mm:  $\pm 0.2$ mm  
1—5mm:  $\pm 0.3$ mm  
> 5mm:  $\pm 0.5$ mm