



Patent: ZL 2010 2 0625647.0



**Main Feature**

1. Small size (31.9x27.5x19.6 in mm) produces a switching capacity up to 30A for high density P.C.Board mounting technique.
2. The contact form construction is 1A/1B/1C
3. The Surge Resistance of BT90 series is 10,000V
4. Sealing Construction (Free from dust and solder flux):  
BT90-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  
BT90- D.....20A/10A at 250VAC  
BT90-DM/DB.....30A at 250VAC
- Max. Allowable Current  
BT90-D.....20A  
BT90-DM/DB.....30A
- Max. Allowable Voltage  
BT90-D/DM/DB.....AC250V
- Max. Allowable Power Force  
BT90-D.....5,000VA  
BT90-DM/DB.....7,500VA
- Contact Material..... Ag Alloy
- Contact Form..... SPDT&SPST

**Performance (at Initial Value)**

- Contact Resistance..... $\leq 50m\Omega$  at 6VDC/1A
- Operate Time.....10ms. Max
- Release Time..... 5ms. Max
- Dielectric Strength:  
Between Coil & Contact.....2,500VAC at 50/60 Hz  
for one minute  
Between Contacts.....1,500VAC 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°C
- Humidity Range.....5%~85% RH
- Coil Temperature Rise..... 35°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 23g

**Safety Standard & Its File Number**

- UL.....E333244
- TUV.....R50267516
- CQC.....CQC11002061851

### Coil Specification (at 20 °C)

Coil Sensitivity	Nominal Voltage (VDC)	Nominal Current (mA)	Coil Resistance ( $\Omega \pm 8\%$ )	Power Consumption (W)	Pull-In Voltage (VDC)	Drop-Out Voltage (VDC)	Maximum Allowable Voltage (VDC)
BT90-D/DM/DB	5	178.6	28	Abt. 0.9	75% Maximum	10% Minimum	130%
	6	150	40				
	9	100	90				
	12	75	160				
	24	37.5	640				
	48	18.8	2560				

### Ordering Information

**BT90 - SS - 1 12 D M**

**Contact Form:** Nil:One form C  
M:One form A  
B:One form B

**Coil Type:** D:Standard DC Coil

**Coil Voltage:** 03:3V, 05:5V,06:6V,09:9V  
12:12V,24:24V,48:48V

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

**Type of Sealing:** SS:Plastic Sealed Type

**Type:** BT90

### Classification

Model	BT90		
Coil Sensitivity	Standard DC Coil		
Plastic Sealed Type	1A	1B	1C
	BT90-SS-1□□DM	BT90-SS-1□□DB	BT90-SS-1□□D

### Dimension

