

**BST-ELC06****DIGITAL RCD TESTER**

**Version A = 240VAC    Version B = 230VAC**  
**Version C = 220VAC    Version D = 110VAC**

**INSTRUCTION MANUAL**

<b>Index</b>	<b>Page</b>
1. Safety precautions .....	1-2
2. Specifications .....	3
3. Features .....	4
4. Connections .....	4
5. Instrument layout .....	5
6. RCD Test .....	6-7
7. Preparation for measurement .....	8
8. Battery replacement .....	8
9. Fuse replacement .....	8
10. Servicing and calibration .....	9
11. Cleaning and storage .....	9

## 1. Safety Precautions

Electricity can cause severe injuries even with low voltages or currents. Therefore it is extremely important that you read the following information before using your Digital RCD Tester.

- 1.1 This instrument must only be used and operated by a competent trained person and in strict accordance with the instructions. We will not accept liability for any damage or injury caused by misuse or non compliance with instructions and safety procedures.
- 1.2 Never open Your Digital RCD tester except for battery replacement. (See Battery replacement section).
- 1.3 Always inspect you Digital RCD tester and test leads before using for any sign of abnormality or damage. If any abnormal conditions exist ( broken test leads, cracked case, display faulty etc... ) do not attempt to take any measurement or use the tester.  
Return your Digital RCD tester to your nearest Distributor for Service.
- 1.4 Never replace the protective fuse with any other than the specified or approved equivalent.
- 1.5 Your Digital RCD tester has been designed with your safety in mind. However, no design can completely protect against incorrect use. Electrical circuits can be dangerous and/or lethal when a lack of caution or poor safety


practice is used. Use caution in the presence of voltage above 24V as these pose a shock hazard.


- 1.6 Pay attention to cautions and warnings which will inform you of potentially dangerous procedures.

Rated environmental conditions:

- (1) Indoor use.
- (2) Installation Category III 300V.
- (3) Pollution Degree 2.
- (4) Altitude up to 2000Meters.
- (5) Relative Humidity 80% Maximum.
- (6) Ambient Temperature 0°~40°C.

- 1.8 Observe the International Electric symbols listed below.

 Meter is protected throughout by double insulation or reinforced insulation.

 Caution! Refer to this manual before using the meter.

 Warning! Risk of electric shock.

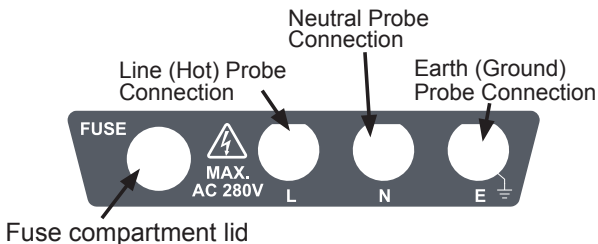
## 2. Specifications

Current Settings	3mA, 5mA, 10mA, 15mA, 20mA, 30mA, 50mA, 100mA, 150mA, 250mA, 300mA, 500mA	
Current Selection	Rotary Switch Selector	
Phase Start Selection	Referenced to Earth	
0° and 180°	Yes	
Over-Temperature Protection	Yes	
Wiring Correctness Indication	Yes ( LEDS )	
Trip Indicator	Yes ( LCD )	
Operating Voltage ( L-E ) 50Hz or 60Hz	Version A Version B Version C Version D	240VAC 230VAC 220VAC 110VAC
Voltmeter (L-E)	10Vac ~ 280Vac (50Hz or 60Hz)	
Timer Resolution	1ms (Max Time = 2.999S)	
Timer Accuracy	± 2ms	
Current Accuracy	± 5% ± 1mA	
Voltmeter Resolution	1VAC	
Voltmeter Accuracy	± 2%±1VAC	
Operating Temperature	0°C ~ 40°C	
Storage Temperature	-10°C ~ 50°C	
Power source	1.5V (AA) × 6 (Alkaline battery)	
Measure Battery Voltage at start up Current Specified at Operating Voltage.		

### 3. Features

- Microprocessor-controlled.
- Extra large LCD(78 × 67mm).
- Very low consumption.
- 50Hz and 60Hz operation.
- Accurate digital readout of disconnection time.
- Over temperature protection.
- Over voltage protection.
- Fuse protection.
- Zero crossing circuitry permit testing at 0° or 180°.
- Auto power off in 3 minutes.
- Backlight function.
- Wiring polarity indicator.
- Measure voltage between Line and Earth before testing.
- Frequency measurement indication.

### 4. Connections

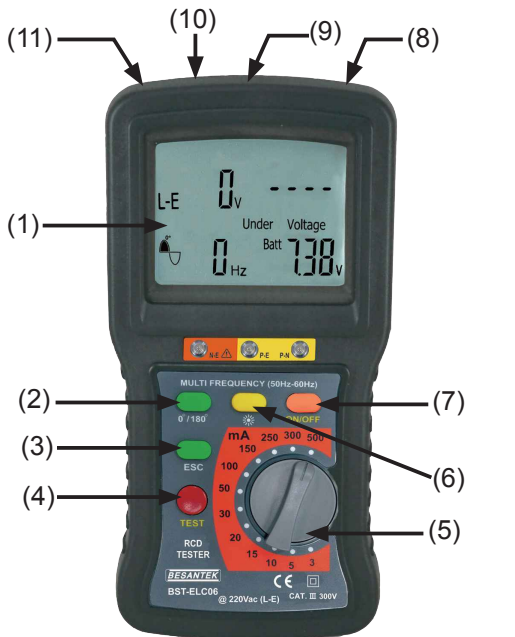


**apply only**

**Operating Voltage  $\pm 10\%$  / 50Hz or 60 Hz.**

-4-

## 5. Instrument Layout



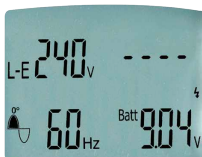
- |  |                             |
|--|-----------------------------|
| (1) LCD                                  | (7) ON/OFF button           |
| (2) 0°/180° Phase angle<br>select button | (8) Fuse                    |
| (3) ESC button                           | (9) L(LINE) terminal        |
| (4) TEST button                          | (10) N(NEUTRAL)<br>terminal |
| (5) Function rotary switch               | (11) E(EARTH)<br>terminal   |
| (6) ☀ Backlight button                   |                             |

## 6. RCD Test

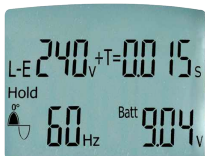
1. Turn Instrument "ON" by pressing the "ON/OFF" button. The LCD will come to the following screen and will show the battery voltage.



2. When connect the instrument to a 240V system (with an RCD), the LCD will come to the following screen.



3. Press the "0° / 180°" button to select the phase angle: 0° or 180°. Then press the "TEST" button to do the test, the LCD will come to the following screen.




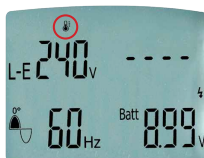
(0°)




(180°)



4. If the instrument is over-temperature, the LCD will come to the following screen, the "  " symbol will show on the LCD. This means the instrument stops working. The user needs to wait until the instrument cool down.



5. If the battery voltage is too low, the LCD will come to the following screen, the "  " symbol will show on the LCD. Please replace with new batteries.



## **7. Preparation for Measurement**

**Before testing Always Check the Following.**

- There is no visual damage to the Instrument or Test leads.
- Test lead Continuity with a continuity meter.

## **8. Battery Replacement**

Your Digital RCD Tester's batteries are situated under the tester.

Disconnect the Test leads from the Instrument, remove the battery cover and the batteries.

Replace with six 1.5V AA alkaline batteries, taking care to observe correct polarity.

Replace the Battery cover.

## **9. Fuse Replacement**

Open the fuse compartment lid. Remove the bad fuse, and replace with the new one.

Replace the fuse compartment lid.

Fuse: 1A / 500V, 5 × 20mm

**NOTE :**

1. CAT.IV - is for measurements performed at the source of the low-voltage installation.
2. CAT.III - is for measurements performed in the building installation.
3. CAT.II - is for measurements performed on circuits directly connected to the low voltage installation.

**10. Servicing and Calibration**

Your Digital RCD tester has been factory Calibrated. However, it is of good practice to have your Instrument "CERTIFIED" by a National Calibration Facility and "CHECKED" every year by an Professional workshop.

**11. Cleaning and Storage**

Periodically, wipe the case with a damp cloth and Detergent; do not use abrasives or solvents. If meter is not to be used for periods longer than 60 days, remove the batteries and store them separately.

**WARNING**

**To avoid electrical shock or damage to the meter, do not get water inside the case.**