

# Three-phase RCD tester/Earth leakage test/Indicates phase rotation



Model: 9221B



## Features:

- Indicates Phase Rotation.
- Indicates Phase Presence.
- TEST for Disconnection Sensitivity.
- Indicates Battery Status.
- TEST for Disconnection Time.
- Measure Voltage Phase to Earth.
- Select One of 3 Phase to test RCD or ELCB.
- Color Coded test Leads.
- Phase Presence Indication from as low as 100V
- Works from 8 x "C" size 1.5VBattery.
- Very Low Consumption.
- Fused Earth Leakage Tester .
- Lightweight, Robust & Compact.
- ELCB Works 50Vac to 330Vac 50Hz / 60Hz.
- Led indication of Voltage on ELCB.
- Phase Rotation and Presence does not require battery to indicate.
- EN 61010-1 / EN 61326-1 / CAT III 550V.

## Scope of Supply:

- 1 pc 9221B
- 8 pc 1.5V Battery IEC LR14
- 3 pc Crocodile clamps Test lead with safety plug
- 1 pc Instruction Manual

The Instrument is a combined 3 Phases Presence and Rotation Indicator combined with a 3 Phases Industrial Earth Leakage Tester.

When utilized as a 3 Phase Presence and Rotation Indicator, the instrument does not use the batteries and can still be utilized if the batteries are not present or if the batteries are too low.

The 3 phase Presence and Rotation Indicator which is inside the 9221B, takes its power from the circuit under test.

The Earth Leakage can be utilized on a Single Phase (up to 317Vac Line to Earth) or a 3 Phase Powered System (550V Line to Line or Phase to Phase) with a protective Earth conductor.

The Earth Leakage requires batteries.

When utilized on a single phase, ensure correct connection between Line and Earth before using the tester.

When utilized on a 3 Phase Powered System, the instrument is then utilized as a 3 Phases Presence and Rotation Indicator and a Earth leakage tester (selecting which phase to Earth will be utilized for the RCD test).

When utilized on a 3 Phases Powered System, this instrument is a rotary field indication instrument which display all three phases by lighting up its corresponding Lamp.

It display the rotation (clockwise or anti-clockwise) on a LED.

To test the tripping time or the tripping current of a Earth Leakage Circuit Breaker, make sure to connect the earth wire.

This instrument represents the quickest and easiest way for servicing, repairing and electrical maintenance of 3 phase system with earth leakage.

With this equipment, you can, before connecting Load to Supply:

On the supply side;

Quickly verify the presence of the three Phases on a 3 Phases Power System.

Confirm the Phase Rotation on a Powered 3 Phase System.

Test the Tripping (disconnection) current and time of the protections.

## Technical Data:

### Phase Presence

Voltage Range 100V-450V/AC

Frequency Range 10Hz -400Hz.

### Phases Rotary Field Direction

Voltage Range 100V-450V/AC

Frequency Range 2Hz-400Hz.

### RCD Test

Test current 2-999mA / 50Hz-60Hz

Current Resolution 1mA

Current Accuracy  $\pm 3\% \pm 4\text{mA}$

Trip time Resolution 1ms (Max Time 99.99s)

Trip time Accuracy 1ms  $\pm 4\text{ms}$

Phase Start Selection 0° or 180°

Over-Temperature Protection Yes

Phase Polarity Trip Indicator Yes

Operating Voltage ( L-E ) 110V-317V/AC

### Voltage Test

Voltage Range 50-550V/AC

Voltmeter Resolution 1V

Voltmeter Accuracy 50-350 V/AC  $\pm 3\% \pm 2\text{V}$

350-550V/AC  $\pm 7\% \pm 3\text{V}$

Power Supply 8x1.5V / IEC LR14

Dimensions 330 x 260 x 160 mm

Weight 3.85 kg (battery included)

Operating temperature -15°C to +55°C

Storage Temperature -20°C to +70°C