

# 3 Phase Industrial Earth Leakage Tester and 3 Phase Presence & Rotation Indicator



CE

## 6221 EL

This Test 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 6221 EL, 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 ELCB 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.

## FEATURES

- **Microprocessor-controlled.**
- 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 ELCB.
- Color coded test leads.
- Phase presence indication from as low as 100Vac.
- Very low consumption.
- Fused earth leakage tester.
- 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 CAT III 600V EN 61326-1

## SPECIFICATIONS

### Determination of the Phase Presence

Nominal Voltage for Phase Presence Indication (the voltage required for the neon lamps L1, L2, L3 to lit up).....  
From 100Vac to 450Vac.

Frequency Range.....From 10Hz to 400Hz.

### Determination of the Phases Rotary Field Direction:

Direction (the voltage required to have the direction LEDs L1-L2-L3 or L2-L1-L3 to indicates)..From 100 to 450Vac.

Frequency Range.....From 2Hz to 400Hz.

### Protection

Over Load.....550V(between all terminals)

Over Voltage.....Class III - 450V towards ground.

### Earth Leakage

**Current Settings** 999mAac / 50Hz-60Hz

**Current Selection** Knob

**Phase Start Selection(\*)** 0° and 180°

**Over-Temperature Protection(\*)** Yes

**Phase Polarity Trip Indicator(\*)** Yes

**Operating Voltage(L-E)** 220Vac to 317Vac

(\*)Referenced to Earth

**Timer Resolution** 1ms(Max. Time = 99.99s)

**Timer Accuracy** 1ms ± 4ms

**Current Accuracy** ±3% ± 4mA

**Current Resolution** 1mA

**Voltmeter Accuracy(50Hz)** 50-350 Vac = ±3% ± 2V

350-550Vac = ±7% ± 3V

**Voltmeter Resolution** 1V

**Maximum Current Specified at 317Vac / 50Hz**

**Batteries** 1.5V "C" × 8 Alkaline batteries

Bat OK Led = Vbat >9V

**Dimensions** : 330(L) × 260(W) × 160(D)mm

**Weight** : 3850g (batteries included)

**Operating temperature Range** : 0°C to + 40°C

**Storage Temperature** : -10°C to + 50°C