



Model 6220 EL

Digital ELCB (RCD) Tester



Features

- Microprocessor technology ensures high performance accuracy and reliability.
- Fully programmable via tactile key pad.
- Direct readout of disconnection, time or current.
- Voltage measured during test.
- Housed in a heavy duty carry case.
- Suitable for all industrial, mining and domestic environments.
- Display can be customized for special orders.
- Indicate voltage and trip Current/Time.
- Use binary principle.
- True resistor switching.

Specifications

Rated tripping current at 317V:	1000mA (2000mA on special orders)
Lowest resolution:	1mA
System voltage:	230 / 380 / 550V (50Hz)
Maximum trip time:	99.99s
Highest resolution:	10ms

Typical Accuracy

Rated trip current:	$\pm 1\% \text{rdg} \pm 2 \text{dgt}$
Voltage range:	$\pm 1\% \text{rdg} \pm 1 \text{dgt}$
Trip-time:	$\pm 1\% \text{rdg} \pm 2 \text{dgt}$
Operating temperature:	0°C to 40°C
Operating-humidity:	80% Max. relative humidity
Dimensions:	330(L) × 260(W) × 160(D)mm
Weight (battery included):	Approx. 3700g
Power source:	1.5V "C" × 8 Alkaline batteries
Safety standard:	EN 61010-1 CAT III 600V EN 61326-1
Accessories:	Instruction manual, Test leads, Batteries.

Introduction

- The 6220 EL is menu assisted making it extremely user friendly.
- It is a universal ELCB tester suitable for testing all ELCB's, including instantaneous, inverse time-delay and fixed time delay types. Although primarily intended for the testing industrial ELCB's, it may also be used to test 30mA ELCB's (e.g. welding plugs).
- The instrument is extremely versatile and easy to use. It is a two-lead instrument and may be used on either 380V or 550V systems (220 or 317V L-E). It should be noted however, that the maximum current attainable is proportional to the system voltage (1000mA at 550V/700mA to 380V).
- The operation of the unit is fully microprocessor controlled through a keypad. There are no switches or push buttons.
- The tester has an auto-off feature and draws no current when off. Current increases to a minimal 8mA during operation. 8 "C" cell batteries provide a life of over 12 months in normal use.

ELCB test procedures

• Instantaneous ELCB's

Instantaneous ELCB's are the easiest to test with the 6220 EL, due to its fully automatic operation. First, one of the tester's leads is connected to earth. Once the second lead (red probe) is touched to a line, and voltage is detected, a gradually increasing fault (ramp current) is automatically applied. As the fault increases, it is clearly displayed on the LCD. On tripping, the reading freezes, and displays the voltage and trip current. To save time and reduce heat dissipation, the ramp starting current may be selected. DURING THIS TEST THE TIMER IS INOPERATIVE

• Inverse time-delay ELCB's

The correct operation of an inverse time-delay ELCB may only be determined if the characteristic curve of the ELCB in question is available. The operation of the ELCB is best assessed by checking the tripping time for given fault currents at a minimum of two points on the curve. These points should be on either side of the knee as shown in Figure 1.



The desired fault current is selected by simply keying it in via the key pad. When the unit is connected, the fault is injected, and the Time starts. On tripping, the reading freezes. The tripping time for the fault current applied may then readily be compared to published curves.