



INSTRUCTION MANUAL

MT325

RCD/ELCB Tester



1. Features

- 2000mS readout for testing latest delay action breakers
- Fully programmed operation.
- Accurate digital read out of tripping time.
- Two LED lamps give quick check for correct wiring.
- Operates from mains supply. No need for batteries.
- Compact, lightweight and simple to operate.
- Zero cross circuitry permits testing at 0° and 180° portion of sine wave. At these two tests minimum (best) and maximum (worst) trip times will be displayed.
- Data hold function to freeze the digital trip time display allows for easy readout and eliminates the possibility of reading error.

2. Specifications

Measuring Ranges

Trip Current Settings 5mA, 10mA, 30mA, 100mA, 300mA, 500mA

Test Current

No Trip Test 50% of circuit breaker trip current selected
Trip Test 100% of circuit breaker trip current selected
Fast Trip Test 250mA regardless of circuit breaker trip current selected

Fault Trip Time 2000ms (40ms for Fast Trip)

Operating Voltage 220V, 230V, 240V AC $\pm 10\%$ 50/60Hz

Accuracy

Test Current $\pm 3\%$ at 220V, 230V, 240V AC
Test Current Duration (Limiter Incorporated) 2000ms $\pm 5\%$ for Trip and NO Trip Tests 40ms $\pm 5\%$ for Fast Trip Test
Trip Time (Measurement Accuracy) $\pm 2\%$ reading ± 3 digit

4. Operating Instructions

4.1. Warning

- Do not press Test Button unless both P-N and P-E lamps are illuminated with the power supply on and the meter connected to the breaker (this would normally be via a socket outlet located nearest the breaker). If the lamps are not lit, damage to the meter will not occur, but it could be hazardous to the operator. Therefore, turn power supply off and check the connections to socket outlet.
- Disconnect the meter from power source immediately if test lamp goes on without pressing test button.
- If other loads are connected to the same circuits as the breaker (refrigerators etc) they will cause measurement error. To make accurate measurements disconnect all appliances and other loads from the breaker circuit under test.

4.2. Preparation

- Set Trip Current Range Switch to a rated trip current of the circuit breaker under test.
- Connect the instrument to the breaker, make sure that both P-E and P-N lamps are illuminated. If not disconnect the instrument and check wiring at the socket or distribution board for a possible fault.

4.3. No Trip Test (Guard against nuisance tripping)

- Set function switch to No Trip position.
- Hold down the Test Button. A half (50%) of the rated trip current selected will pass through the breaker for 2000ms. The breaker should not trip at this test. This is checked by the continued illumination of the P-N and P-E lamps. The no trip current sensitivity of the breaker is now tested OK. If the breaker should trip because of a fault, the display reads the trip time with P-N, P-E and test lamps extinguished. The reading is displayed only while the Press to Test Button is held down. It will display the result for approx. 10 seconds before changing.
- Reverse 0°/180° selector position and repeat step 2.

4.4. Trip Test (Correct operation of breaker)

- Set function switch to Trip position
- Hold down the Test Button. The rated trip current (100%) of the circuit breaker current selected will pass through the circuit breaker to 2000mS max. At this test the breaker trips and all lamps go out. The reading is displayed only while the Press to Test Button is held down. It will display the result for approx. 10 seconds before changing.
- Reset the breaker and reverse 0°/180° selector position for a re-test. The trip time displayed will be different from the readout on the previous test.
- If the breaker does not trip the P-N and P-E lamps will remain illuminated.

4.5. Fast Trip Test

This test is especially required for a circuit breaker fitted to lessen the hazard of electrical shock that might result from direct contact.

- Set function switch to Fast Trip position (this will override all functions)
- Hold down the Test Button. Regardless of the trip current selected 250mA current will pass through the circuit breaker for 40ms maximum. As on the trip test the circuit breaker trips and all lamps go out. The reading is displayed only while the Press to Test button is held down. It will display the result for approx 10 seconds before changing.
- Reset the breaker and reverse 0°/180° selector position for a re-test. The breaker should trip at these two tests within 40ms. If not the breaker is probably faulty.



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