

# Portable LIOM Tester

PHC Simulator

## E15T

# Installation Instructions

### Applications

The tester can be used to provide a convenient means for in-service checking of the Line Isolation Monitor (LIM) function of a Line Isolation and Overload Monitor (LIOM). It will connect a known Resistive and/or Capacitive impedance between the isolated supply and Earth, to give Prospective Hazard Currents (PHC) that can be used to check the calibration of the LIM.

### TEST PROCEDURE:

1. Unplug all equipment from the isolated supply.
2. Set all the knobs of the E15T to the OFF position and plug the unit into the isolated supply.
3. Rotate the 'Test Select Knob' clockwise to the 'L1 Check' and 'L2 Check' ranges, making sure that the 'L1 and L2 Fail Indicators' do not turn on. If the indicators do turn on, a further test (refer to a. and b. below) is required, using a current meter, to confirm that the standing PHC is below 2mA.

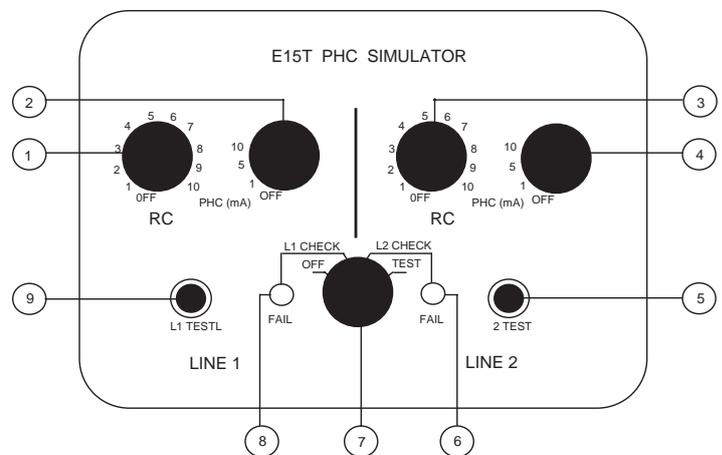
**Note :** Prior to carrying out this test, the E15T tester must be unplugged and it is essential that there are no short circuits between Line 1 or Line 2 and Earth, or the current meter will blow a fuse.

- a. Line 1 Standing PHC Test : Use the current meter to measure between Line 2 and Earth of the isolated supply. The reading should be less than 2mA.
  - b. Line 2 Standing PHC Test : Use the current meter to measure between Line 1 and Earth of the isolated supply. The reading should be less than 2mA.
4. Rotate the 'Test Select Knob' clockwise to the 'Test' range and then set Line 1 and/or Line 2 PHC to the required setting using 'L1 and L2 Resistive and Capacitive PHC Knobs'.
  5. Apply the pre-set Line 1 and/or Line 2 PHC by pressing either the 'L1 and/or L2 Test Button' and then check that the corresponding reading of the LIOM is between 90% and 155% of the pre-set PHC.

**Note 1.** When applying Resistive and Capacitive PHC on the same line, the resulting vector sum of the PHC will be displayed on the LIOM.

**Note 2.** When applying PHC to both Lines, the greater PHC of the two will be displayed by the LIOM.

### Designations



- |                             |                      |
|-----------------------------|----------------------|
| 1. Resistive PHC Knob (L1)  | 6. L2 FAIL Indicator |
| 2. Capacitive PHC Knob (L1) | 7. Test Select Knob  |
| 3. Resistive PHC Knob (L2)  | 8. L1 FAIL Indicator |
| 4. Capacitive PHC Knob (L2) | 9. L1 Test Button    |
| 5. L2 Test Button           |                      |

### TECHNICAL SPECIFICATIONS

Operating Voltage (1)	240V a.c. + 10% 50Hz
Resistive PHC (2)	1mA - 10mA in 1mA steps + 1% @ 240V a.c. 50Hz
Capacitive PHC (2)	1mA, 5mA, 10mA + 10% @ 240V a.c. 50Hz
L1 and L2 Check	Short between Line 1 or (indicator on) Line 2 and Earth
Physical Dimensions:	190mm (L) x 138mm (W) x 88mm (H)
Length of 3-core flex	Approx 1.8m

- Note:**
1. E15T only to be used on an isolated supply.
  2. PHC will vary in proportion to the operating voltage.

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