Brooks
Utility Products
A Tyden Group Company

LINE NEUTRAL TESTER
Product Data Sheet

Brooks' Line Neutral Tester offers meter technicians an effective method to locate loose, open, or faulty connections.

FEATURES

- Rated for 120 / 240
- 5000 watt load.
- Fure protected.
- Portable, lightweight, and rugged construction.
- Two conveniently located LED digital meters provide immediate indication of a problem line or neutral.
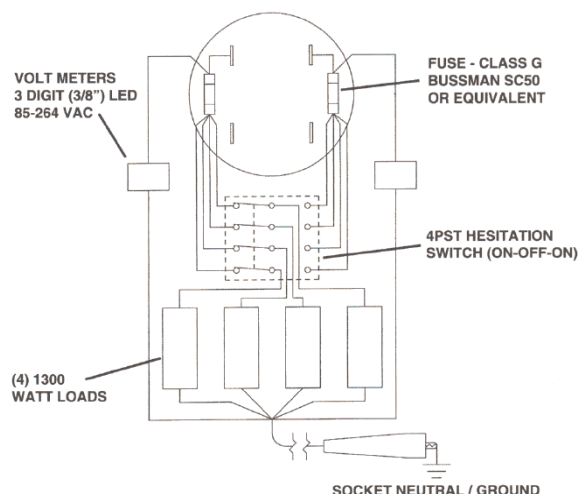
MODEL NUMBER

LT-3985

APPLICATIONS

The Brooks' Line Neutral tester is ideal for checking line and neutral connections.

| ⚠	SAFETY
🔓	SECURITY
✓	RELIABILITY

DIMENSIONS

VOLT METERS 3 DIGIT (3/8") LED 85-264 VAC

FUSE - CLASS G BUSSMAN SC50 OR EQUIVALENT

4PST HESITATION SWITCH (ON-OFF-ON)

(4) 1300 WATT LOADS

SOCKET NEUTRAL / GROUND

1. Connect the neutral lead of the LT to the neutral/ground of the meter socket.
2. Insert the LT into the meter socket.
3. Observes and verify that the voltages shown on the voltmeters are acceptable.
4. Operate the toggle switch to the left/right, loading the left/right phase.

Observe the readings on both voltmeters:

- If the left and right voltmeter readings did not change significantly from the readings in Step 3, the neutral and left/right phase conductors and connections are okay.
- If the voltage on the left/right meter drops significantly and the voltage on the right/left meter does not change significantly, the left/right phase has a bad conductor and/or connection.
- If the voltage on the left/right meter drops significantly and the voltage on the right/left meter increases by a corresponding amount, the neutral has a bad conductor and/or connection.

5. Return the toggle switch to the off (center) position.
6. Remove the LT from the socket. Install and secure the KWH meter.

*The allowable voltage deviations are to be determined by the utility.

Circuit Resistance (ohms) vs Voltage Drop (volts)
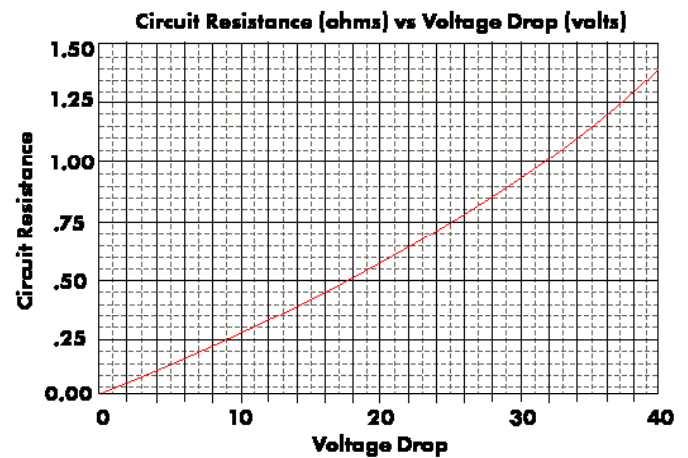
NOTES:
The amount of voltage drop in the loaded line and neutral reflects the combined resistance of the two. The amount of rise in voltage on the line that is not being loaded reflects the neutral resistance.

EXAMPLE:
1. Start with no load—both meters read 120 volts.
2. Load the left line
   A. If, the left meter reads 110 volts (10 volt drop),   then,
   B. From the graph the resistance is 0.25 ohms in the left line and neutral.
3. If, at the same time, the right meter reads 124 volts (4 volt rise), then the neutral resistance = (volt rise ÷ volt drop) × resistance or = $(4 \div 10) \times 0.25 = .1$ ohm.
4. Calculate the resistance on the left line as 0.25 ohm − .1 ohm = .15 ohm.