RESISTANCE TO GROUND TESTER

Model 255

Operating Instructions

4/09

electro-tech systems, inc.
www.electrotechsystems.com
3101 Mt. Carmel Avenue, Glenside, PA 19038 • Tel: (215) 887-2196 • Fax: (215) 887-0131

1.0 DESCRIPTION

The Model 255 Resistance to Ground Tester shown in Figure 1.0-1 is a precision instrument that automatically checks the integrity of low resistance to ground (RTG) connections. The user can select either a 1 Ohm or a 2 Ohm resistance limit.

Figure 1.0-1: Model 255 Resistance To Ground Tester

When the PUSH TO TEST button is depressed, the unit accurately measures the resistance between the red and black probes. If the resistance is less than the selected 1 or 2 Ohm limit, the green PASS LED lights. If the resistance is greater the selected limit, the red FAIL LED lights. The Model 255 utilizes an open circuit test voltage of 5 Volts D.C. The test current is 50 milliamperes. An automatic battery low detection circuit is also incorporated into the unit.

NOTE

The Model 255 Resistance To Ground Tester is **NOT** intended to measure continuity of live AC power circuits. A fuse is incorporated to protect the unit from serious damage if it is accidentally connected across the AC line. A low pass filter is also incorporated to minimize AC leakage current and AC field effects.

Two 3-foot long cables are provided with standard banana plug connectors. The black wire is terminated with a green banana plug for connection to the ground jack of a standard 3-wire AC outlet or other good ground point. Alligator clips are included to facilitate connection to other ground points and to the item being measured.

2.0 OPERATION

Connect the Black (-) lead to one ground point and the Red (+) lead to the other ground point. If an ETS Model 256 Utility Wiring Verifier is available, plug it into the AC outlet and connect the green banana plug to the black ground jack located on the Verifier. Otherwise, connect it to the desired ground point. Connect the red lead to the other ground point.

Depress the PUSH TO TEST button for approximately two seconds and observe the Green and Red PASS/FAIL LED indicators. The Green PASS LED will light if the resistance between the two probes is less than the selected 1 or 2 ohms. The Red FAIL LED will light if the resistance between the two probes is greater than the selected 1 or 2 ohms.

If neither LED lights, this indicates a battery low condition. Replace the battery with any standard 9-Volt alkaline unit.

3.0 SPECIFICATIONS

PASS/FAIL Threshold: User selectable - 1 or 2 ohms ±10%
Open circuit test voltage: 5 Volts ± 3%
Time to indicate a failure: >1.1 or 2.2 ohms -<3 seconds
Battery life: 15,000 test @ 2 seconds/test
Battery Type: 9 Volt alkaline - Duracell type MN 1604 or equivalent

4.0 WARRANTY

Electro-Tech Systems, Inc. warrants its equipment, accessories and parts of its manufacture to be and remain free from defects in material and workmanship for a period of one (1) year from date of invoice. It will, at it's discretion, either replace or repair without charge, F.O.B. Glenside, similar equipment or a similar part to replace any equipment or part of its manufacture which, within the above stated time, is proved to have been defective at the time it was sold. All equipment claimed defective must be returned properly identified to the Seller (or presented to one of its agents for inspection). This warranty only applies to equipment operated in accordance with Seller's operating instructions.

Seller's warranty with respect to those parts of the equipment that are purchased from other manufacturers shall be subject only to that manufacturer's warranty.

The Seller's liability hereunder is expressly limited to repairing or replacing any parts of the equipment manufactured by the manufacturer and found to have been defective. The Seller shall not be liable for damage resulting or claimed to result from any cause whatsoever.

This warranty becomes null and void should the equipment, or any part thereof, be abused or modified by the customer of if used in any application other than that for which it was intended. This warranty to replace or repair is the only warranty, either expressed or implied or provided by law and is in lieu of all other warranties. The Seller denies any other promise, guarantee or warranty with respect to the equipment or accessories. In particular, as to its or their suitability for the purposes of the buyer or its or their performance, either quantitatively or qualitatively or as to the products that it may produce and the buyer is expected to expressly waive rights to any warranty other than that stated herein.

ETS must be notified before any equipment is returned for repair. ETS will issue an RMA (Return Material Authorization) number for return of equipment.

Equipment should be shipped prepaid and insured in the original packaging. If the original packaging is not available, the equipment must be packed in a sufficiently large box (or boxes if applicable) of double wall construction with substantial packing around all sides. The RMA number, description of the problem along with the contact name and telephone number must be included in formal paperwork and enclosed with the instrument. Round trip freight and related charges are the owner's responsibility.

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