g GE Industrial Systems *Renewal Services* *Louisville,KY*	**Functional Testing Specification** **LOU–GED-IC4501A100**

Test Procedure for a Isolation Amplifier IC4501A100A

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Functional test procedure for an Isolation Amplifier

1. SCOPE

1.1 This is a functional testing procedure for a IC4501A100A.

2. STANDARDS OF QUALITY

2.1 Refer to the current revision of the IPC-A-610 standard for workmanship standards.

3. APPLICABLE DOCUMENTS

3.1 The following document(s) shall form part of this specification to the extent specified herein. Unless otherwise indicated, the latest issue shall apply.
3.1.1 Shop Documentation Folder

4. ENGINEERING REQUIREMENTS

4.1 Equipment Cleaning
4.1.1 Equipment should be clean and free of debris prior to applying power unless performing an initial check. Refer to the local documented procedures for cleaning guidelines.
4.2 Equipment Inspection
4.2.1 Equipment should be visually inspected for any defects prior to applying power. This inspection should include the following as a minimum:
4.2.1.1 Wires broken or cracked
4.2.1.2 Terminal strips / connectors broken or cracked
4.2.1.3 Loose wires
4.2.1.4 Components visually damaged
4.2.1.5 Capacitors leaking
4.2.1.6 Solder joints damaged or cold
4.2.1.7 Circuit board burned or de-laminated
4.2.1.8 Printed wire runs burned or damaged

5. EQUIPMENT REQUIRED

5.1 The following equipment is required to perform the process requirements. Equipment may be substituted provided that all accuracy's and test ratios are equivalent or better.

Qty	Reference #	Description
1		Fluke 85 DMM (or Equivalent)
1		50VDC supply
1		0-15VDC adjustable Power Supply

6. TESTING PROCESS

6.1 Setup

6.1.1

Note:

6.2 Testing Procedure

6.2.1 Connect a 3K load resistor from B2P to B2N. Connect a voltmeter across the resistor to read the output voltage.

6.2.2 Connect 50 VDC (+) to Inp+ and (-) to Inp -.

6.2.3 With no input, adjust Bal pot for zero output volts.

6.2.4 Input 5 VDC through a 20K resistor to F1 and F2. Output voltage should be approx. 10V. Reversing the input polarity will cause the output to change polarity. Voltage can be adjusted by changing the value of the resistors at the saddle clamps at R30 and R40 positions. See documentation 68A993557 section 3.

6.2.5 Move the input to F3 and F4. Read 5 approx. 5V output. Move input to F5 and F6. Read 5V output. Move input to F7 and F8. Read 5V output. Move input to F9 and F10. Read Approx 2.5V output. Move input to F11 and F12. Read approx. 2.5V output. Move input to F13 and F14. Read approx. 2.5V output. Reversing the input polarity should cause the output polarity to reverse.

6.3 ***TEST COMPLETE ***

7. NOTES

8. Oscilloscope Verification Examples:

Fig. 1

Fig. 2