g GE Industrial Systems *Renewal Services* *Louisville,KY*	**Functional Testing Specification** **LOU–GED-44C359003-A**

Test Procedure for 44C359003G01

DOCUMENT REVISION STATUS: Determined by the last entry in the "REV" and "DATE" column

REV.	DESCRIPTION	SIGNATURE	REV. DATE
A	Initial release	Paul Kelley	8/29/2003
B	Changed how FGD contacts are tested to allow for a momentary connection.	Paul Kelley	12/16/2003
C			

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PREPARED BY	REVIEWED BY	REVIEWED BY	QUALITY APPROVAL
Paul Kelley	Eric Rouse		Robert Dunn
DATE	**DATE**	**DATE**	**DATE**
8/29/2003	8/29/2003		9/9/03

Functional test procedure for a 44C359003-A

1. SCOPE

1.1 This is a functional testing procedure for a 44C359003-A

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

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		0 to 170 VDC
1		FLUKE 85 DMM

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6. TESTING PROCESS

Note: There are terminals TB4- and TB4A- . Read carefully.

6.1 Setup

6.1.1 Connect a short between terminals TB4-A and TB4-E. Connect a 0 to 170 VDC supply to the TB4 terminal strip (negative to E and positive to J). Set the supply to 0 volts.

6.2 Testing Procedure

6.2.1 Verify the following TB4 and TB4A terminal connections show open relay contacts. G to H, D to C, R to S, L to N, A-B to A-A, A-E to A-D.

6.2.2 Verify the following terminal connections show a good relay contact closure. G to F, D to B, R to P, L to M, A-B to A-C, A-E to A-F.

6.2.3 Increase the PS voltage to 140 volts. You should hear a relay energize. Verify the following terminal connections now show a good relay contact closure. L to N and R to S.

6.2.4 Verify the following terminal connections now show open relay contacts. L to M and R to P.

6.2.5 The relay in the above two steps (GUV) is adjustable by R204 (see Fig. 1) and you should set it so the relay energizes right at 140 volts.

6.2.6 Increase the PS voltage to 165 volts. You should hear a relay energize. Verify the following terminal connections now show a good relay contact closure. A-B to A-A and G to H.

6.2.7 Verify the following terminal connections now show open relay contacts. A-B to A-C and G to F.

6.2.8 The relay in the above two steps (GOV) is adjustable by R202 (see Fig. 1) and you should set it so the relay energizes right at 165 volts.

6.2.9 Reduce the PS voltage to 0 volts for at least 1 minute.

6.2.10 Connect a < 30 volt light bulb to a power supply through TB4A-E and TB4A-F terminals (NC relay contacts). The light should be on.

6.2.11 Return the supply to 165 volts (not the bulb supply).

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6.2.12 Connect a 15K resistor between terminals TB4-K and TB4-E which should cause the bulb to flash off then back on.

6.2.13 Remove the 15K resistor. The relay should be latched so when you again connect it between terminals K and E, you don't here it click again.

6.2.14 Reduce the 165 volt supply to 0 volts for at least one minute.

6.2.15 Connect the bulb and it's supply through TB4A-E and TB4A-D terminals (NO relay contacts). The light should be off.

6.2.16 Return the supply to 165 volts (not the bulb supply).

6.2.17 Connect a 15K resistor between terminals TB4-K and TB4-E which should cause the bulb to flash on then back off.

6.2.18 Verify terminals D to C now show a good relay contact closure.

6.2.19 Verify terminals D to B now show open contacts.

6.2.20 Remove all power and connections made for the test.

6.3 TEST COMPLETE ***

7. NOTES

8. Drawings:

Fig. 1

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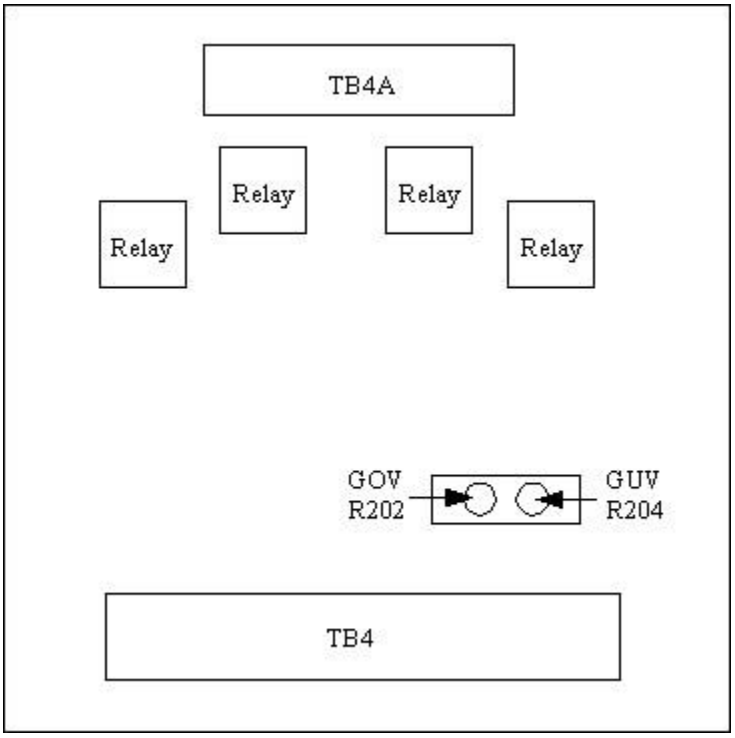

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