



GE Energy Management

## Functional Testing Specification

*Industrial Repair Services  
Louisville, KY*

**LOU-GED-44C378295**

### Test Procedure for a 44C378295G04

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

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A	Initial release	Steve Pharris	06/15/2015
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## 1. SCOPE

1.1 This is a functional testing procedure for a 44C378295G04.

## 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 Check board's electronic folder for more information

## 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 site specific SRA's 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, cracked, or loosely connected

4.2.1.2 Terminal strips / connectors - broken or cracked

4.2.1.3 Components - visually damaged

4.2.1.4 Capacitors - bloated or leaking

4.2.1.5 Solder joints - damaged or cold

4.2.1.6 Circuit board - burned or de-laminated

4.2.1.7 Printed wire runs / Traces - 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
2		Fluke 87 DMM (or Equivalent)
1		Tenma Dual Power Supply

**6. Pre-Test Notes:**

**6.1** The only differences in the four different versions of this unit are the value of the resistors.

G01 – 12K ohm

G02 – 3.3K ohm

G03 – 10K ohm

G04 – 5.6K ohm

**6.2** Use Part Number 5331H1 for any defective LED's.

**6.3** Use Part Number 251D for replacing glass bead diodes.

**6.4** All wires highlighted in the below drawing **MUST** extend 8' (Eight Feet) from edge of board and be labeled correctly (1-11) with #18 Gauge Stranded Wire. Also do not strip the insulation off the end of the wire

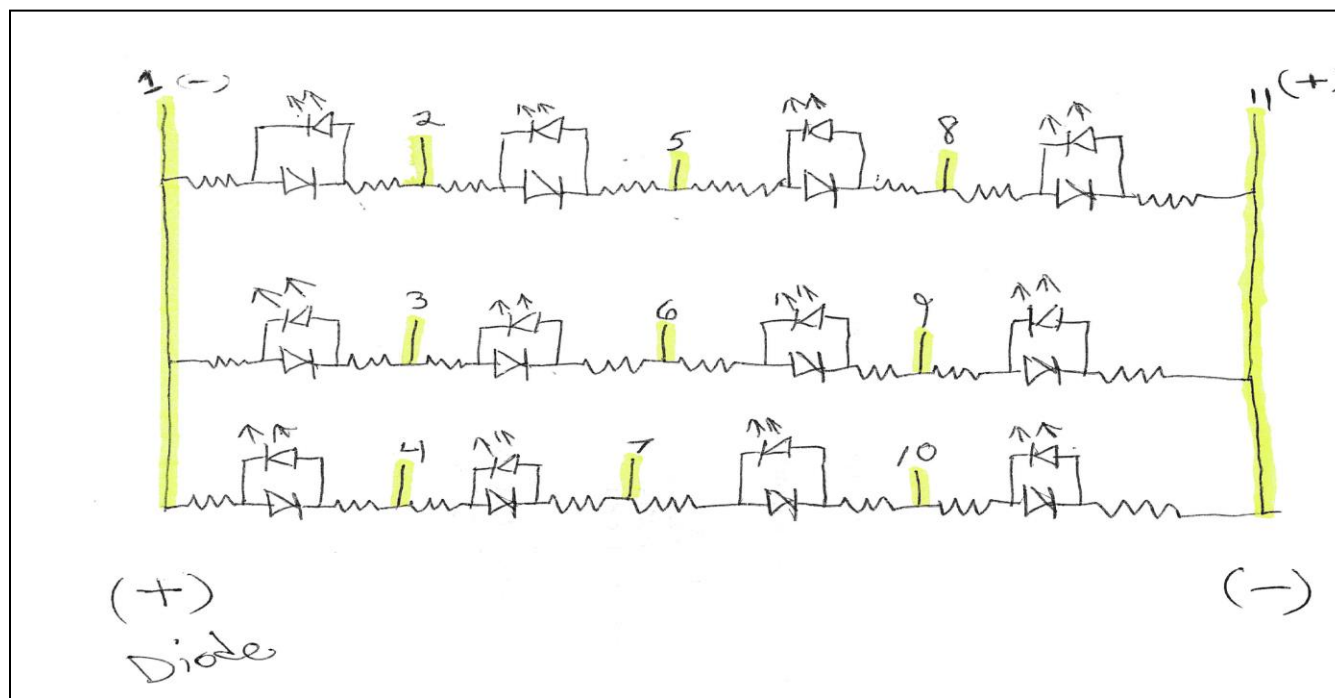


Fig.1 Simplified Schematic (For Reference Only!)

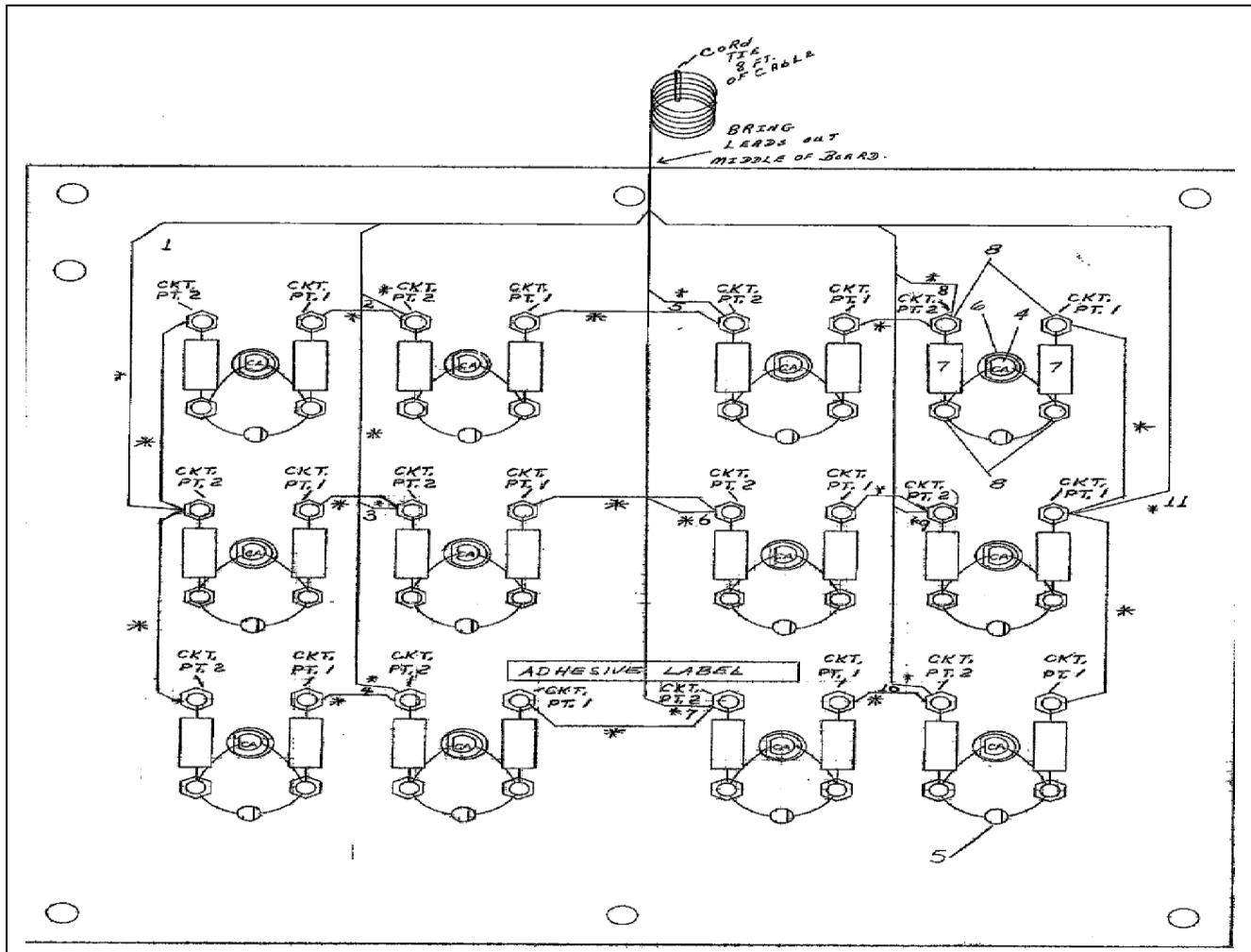


Fig.2 Original Schematic

## 7. Testing Process

### 7.1 Test Procedure

- 7.1.1 Set Tenma power supply in series to achieve 45VDC output and connect to DMM to monitor VDC
- 7.1.2 Connect Common from DMM to 1
- 7.1.3 Connect Positive from DMM to 11

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- 7.1.4** Apply power and verify all LED's are illuminated (if any were replaced they may appear off unless looking directly at them)
- 7.1.5** Turn off Tenma Dual Power Supply
- 7.1.6** Leave the leads from the power supply to the DMM intact but switch the leads coming out of the DMM so that Common from DMM is now going to 11 and Positive from DMM is going to 1
- 7.1.7** Apply voltage and verify 1 to 11 is equal to applied voltage
- 7.1.8** Use the below chart to test the remaining circuits using 11 as reference

Group	Output VDC 2, 3, and 4	Output VDC 5, 6, and 7	Output VDC 8, 9 , and 10
01	Not seen yet	Not seen yet	Not seen yet
02	Not seen yet	Not seen yet	Not seen yet
03	Not seen yet	Not seen yet	Not seen yet
04	33VDC	22VDC	11VDC

**7.2 \*\*\*TEST COMPLETE \*\*\***

**8. Notes**

**8.1** None at this time.

**9. Attachments**

**9.1** None at this time.