g GE Energy	**Functional Testing Specification**
Parts & Repair Services ***Louisville, KY***	**LOU-GED-531X171TMAA**

Test Procedure for a 531X171TMAA

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

REV.	DESCRIPTION	SIGNATURE	REV. DATE
A	Initial release	Scott Cash	11/9/2012
B			
C			

PREPARED BY	REVIEWED BY	REVIEWED BY	QUALITY APPROVAL
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DATE	**DATE**	**DATE**	**DATE**
11/9/2012			11/9/2012

1. SCOPE

1.1 This is a functional testing procedure for a 531X171TMAA card

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
1		DMM Fluke

6. Modifications/Upgrades

6.1 Check Orange Book for any modifications or upgrades.

7. Testing Process

7.1 Setup

7.1.1 Make sure correct relays are installed and clips are present.

7.2 Testing Procedure

7.2.1 Measure resistance values per the following tables, they are divided by connectors used, tolerance +- 1 ohm.

From here	To here	Measure
4TB1	13PL6	0 Ohms
4TB2	13PL5	0 Ohms
4TB3	13PL4	0 Ohms
4TB4	13PL3	0 Ohms
4TB5	13PL2	0 Ohms
4TB6	13PL1	0 Ohms
4TB7	13PL7	0 Ohms
4TB8	13PL8	0 Ohms
4TB9	13PL9	0 Ohms
4TB10	13PL10	0 Ohms
4TB11	13PL11	0 Ohms
4TB12	13PL12	0 Ohms
4TB13	13PL13	0 Ohms
4TB14	13PL14	0 Ohms
4TB15	13PL15	0 Ohms
4TB16	13PL16	0 Ohms
4TB17	13PL17	0 Ohms
4TB18	13PL18	0 Ohms
4TB19	13PL19	0 Ohms
4TB20	13PL20	0 Ohms
4TB21	13PL21	0 Ohms
4TB22	13PL22	0 Ohms
4TB23	13PL23	0 Ohms
4TB24	13PL24	0 Ohms

7.2.2 Continuation from previous table.

From here	To here	Measure
4TB25	11PL4	0 Ohms
4TB26	11PL5	0 Ohms
4TB27	11PL6	0 Ohms
4TB28	11PL7	0 Ohms
4TB29	11PL2	0 Ohms
4TB30	11PL1	0 Ohms
4TB31	11PL9	0 Ohms
4TB32	11PL8	0 Ohms
4TB33	11PL12	0 Ohms
4TB34	11PL13	0 Ohms
4TB35	11PL14	0 Ohms
4TB36	11PL15	0 Ohms
4TB37	11PL16	0 Ohms
4TB38	11PL17	0 Ohms
4TB39	11PL18	0 Ohms
4TB40	11PL19	0 Ohms
4TB41	11PL20	0 Ohms
4TB42	11PL21	0 Ohms
4TB43	11PL22	0 Ohms
4TB44	11PL23	0 Ohms
4TB45	11PL24	0 Ohms

7.2.3 Continuation from previous table.

From here	To here	Measure
4TB62	14PL1	0 Ohms
4TB63	14PL2	0 Ohms
4TB64	14PL3	0 Ohms
4TB65	14PL4	0 Ohms
4TB66	14PL5	0 Ohms
4TB67	14PL6	0 Ohms
4TB68	14PL7	0 Ohms
4TB69	14PL8	0 Ohms
4TB70	14PL9	0 Ohms
4TB71	14PL10	0 Ohms
4TB72	14PL11	0 Ohms
4TB73	14PL12	0 Ohms
4TB74	14PL13	0 Ohms
4TB75	14PL14	0 Ohms
4TB76	14PL15	0 Ohms
4TB85	11PL3	0 Ohms
4TB86	11PL10	0 Ohms
4TB87	11PL11	0 Ohms

7.2.4 Check all MOV's before applying 115VAC to activate the relays. The relay will power up on DC and the MOV will get hot if bad but not blow because of current limit of the power supply. This is a good way to check it before applying full AC so you don't get an unexpected bang.

7.2.5 Connect a switched 115VAC (like a variac) to 4TB46 and 4TB47 and apply power.

7.2.6 Check for continuity between 4TB48 and 4TB49.

7.2.7 Check for continuity between 4TB51 and 4TB52.

7.2.8 Remove the power from the relay.

7.2.9 Check for continuity between 4TB48 and 4TB50.

7.2.10 Check for continuity between 4TB51 and 4TB53.

7.2.11 Move the switched AC connection to 4TB54 and 4TB55 and apply power.

7.2.12 Check for continuity between 4TB56 and 4TB57

7.2.13 Check for continuity between 4TB59 and 4TB60.

7.2.14 Remove the power from the relay.

7.2.15 Check for continuity between 4TB56 and 4TB58.

7.2.16 Check for continuity between 4TB59 and 4TB61.

7.2.17 Move the switched AC connection to 4TB77 and 4TB78 and apply power.

7.2.18 Check for continuity between 4TB79 and 4TB80.

7.2.19 Check for continuity between 4TB82 and 4TB83.

7.2.20 Remove the power from the relay.

7.2.21 Check for continuity between 4TB79 and 4TB81.

7.2.22 Check for continuity between 4TB82 and 4TB83.

7.3 ***TEST COMPLETE ***

8. Notes

8.1 None at this time.

9. Attachments

9.1 None at this time.