g GE Energy	**Functional Testing Specification**
Parts & Repair Services ***Louisville, KY***	**LOU-GED-DS200SSRA-A**

Test Procedure for a Solid State Relay Card

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

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1. SCOPE

1.1 This is a functional testing procedure for a Slid State Relay Card, DS200SSRAG1 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 None at this time

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, 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		Fluke 87 DMM (or Equivalent)
2		Power Supply
1	H188763	Light Bulb with Power Cord
1		1K Ohm Resistor

6. TESTING PROCESS

6.1 Setup OUTPUT SECTION

6.1.1 Set power supply to 24VDC

6.1.2 Connect + to 10PL1 and common to 10PL17

6.1.3 Connect alligator clips from light bulb to OT1A1 and OT1A2

6.1.4 Connect power cord from light bulb to 120VAC and turn switch to on

6.2 Testing Procedure OUTPUT SECTION

6.2.1 Apply power to card

6.2.2 Connect 10PL19 to Common of power supply

6.2.3 Light bulb should light and LED17 should illuminate.

6.2.4 Continue in the same manner, using table below, to check all remaining circuits

Output Channel	This Point to Common	Clip 1	Clip2
OT2	10PL20	OT2A1	OT2A2
OT3	10PL21	OT3A1	OT3A2
OT4	10PL22	OT4A1	OT4A2
OT5	10PL23	OT5A1	OT5A2
OT6	10PL24	OT6A1	OT6A2
OT7	10PL25	OT7A1	OT7A2

6.3 Setup INPUT SECTION

6.3.1 Set PS1 to +30V.

6.3.2 Set PS2 to +24V.

6.3.3 Connect the – of PS2 to the common of the DMM.

6.3.4 Connect a series path from the + of PS2 through the 1k ohm resistor to the + of the DMM (+PS2→1K→+DMM).

6.3.5 Connect another path from the + of the DMM to 10PL-18.

6.3.6 Connect another lead from + of PS2 to 10PL-1

6.3.7 Connect the – of PS2 to R25 (the side closest to IC's).

6.3.8 Connect + of PS1 to IN1 +.

6.3.9 Connect – of PS1 to IN1 –.

6.4 Testing Procedure INPUT SECTION

6.4.1 Apply power from PS2.

6.4.2 Verify DMM reads +24VDC.

6.4.3 Apply power from PS1.

6.4.4 Verify voltage change of at least 10V.

6.4.5 Verify corresponding LED is illuminated. Continue using table for reference.

+30 VDC (PS1)	DC COM (PS1)	+24 VDC (PS2)	DC COM (PS2)	Lead from Pull-up Resistor
IN1+	IN1-	10PL1	R25	10PL-18
IN2+	IN2-	10PL1	R25	10PL-2
IN3+	IN3-	10PL1	R25	10PL-3
IN4+	IN4-	10PL1	R25	10PL-4
IN5+	IN5-	10PL1	R25	10PL-5
IN6+	IN6-	10PL1	R25	10PL-6
IN7+	IN7-	10PL1	R25	10PL-7
IN8+	IN8-	10PL1	R25	10PL-8

6.5 ***TEST COMPLETE ***

7. NOTES

7.1 None At this time

8. ATTACHMENTS

8.1 None At this time