g GE Energy Services	**Functional Testing Specification**
Inspection & Repair Services ***Louisville, KY***	**LOU-GED-DS200SVIA**

Test Procedure for a DS200SVIA Shunt Isolator Card

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

REV.	DESCRIPTION	SIGNATURE	REV. DATE
A	Initial release	G Chandler	12/15/2008
B	Changed step 6.1.11 (TB2-3 to TP9)	J. Hardin	6/19/2009
C			

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DATE	**DATE**	**DATE**	**DATE**
12/15/2008	6/19/2009		12/16/2008

Functional test procedure for a DS200SVIA Shunt Isolator Card

1. SCOPE

1.1 *Description of card*

This is a functional testing procedure for a DS200SVIA card. The SVIA provides isolation of shunt current signals. The mV signal from a shunt is amplified by the input stage of the SVIA, and is isolated from the common mode voltage that exists in the power circuit. Several standard input resistors are provided to amplify ±100 mV to ±475 mV shunt signals to ±7.5 V outputs.

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 N:\Design Folders\DS\DS200\DS200S\SVIA

3.1.2 GEI-100027, located in above directory.

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		30V DC Power Supply
1		mV source

6. TESTING PROCESS

6.1 Testing Procedure

6.1.1 Apply 24VDC positive to TB2-5 and common to TB2-6.

6.1.2 Verify +15VDC at TP15 with common at TP14 and power LED should be ON.

6.1.3 Verify +-15VDC at TP6 & TP5 with common at TP2.

6.1.4 Verify +-15VDC at TP11 & TP12 with common at TP10.

6.1.5 Place jumper J2 in the 200 position.

6.1.6 Connect DVM positive to TP3 and common to TP2.

6.1.7 Adjust Pot R3 and verify you can vary the DC voltage from approx –200mV (fully CCW) to +200mV (fully CW).

6.1.8 Move jumper J2 to the 10 position.

6.1.9 Adjust Pot R3 and verify you can vary the DC voltage from approx –10V (fully CCW) to +10V (fully CW).

6.1.10 Set voltage to 0 volts.

6.1.11 Move DVM leads, positive to TB9 and common to TP10.

6.1.12 Adjust Pot R1 to 0 volts on the DVM. Adjust Pot R2 fully CCW.

6.1.13 Connect an mV source, positive to TP4 and common to TP2 and adjust for 100mV.

6.1.14 The DVM should read approx 100mV. Adjust Pot R2 to fully CW position.

6.1.15 DVM should read approx 500mV.

6.1.16 Return Pot R2 to fully CCW position.

6.1.17 Move the positive lead of the mV source to TB1-7 and verify approx 7.5V on the DVM.

6.1.18 Verify 0 ohms between TB2-7 and TB2-8.

6.1.19 Remove all power from the card.

6.1.20 Static test diodes CR5 and CR6

6.1.21 Connect ohm between the following.

SC2 and TB1-6 = 221 ohms

SC2 and TB1-5 = 475 ohms

SC1 and TB1-1 = 0 ohms

6.2 ***TEST COMPLETE ***

7. NOTES

7.1 No notes at this time