



GE Energy

Functional Testing Specification

Parts & Repair Services
Louisville, KY

LOU-GED-IS200PSCDG1A

Test Procedure for a IS200PSCDG1A Card

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

REV.	DESCRIPTION	SIGNATURE	REV. DATE
A	Initial release	Frank Howard	10/29/2008
B	Added scope pictures to step 6.3.1	G. Chandler	8/10/2012
C			

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DATE 11/6/2008	DATE 8/10/2012	DATE	DATE 11/6/2008

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1. SCOPE

1.1 This is a functional testing procedure for an IS200PSCDG1A Turbine 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 IS200PSCDG1A Schematics

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
2		Fluke 87 DMM (or Equivalent)
1		Isolated Oscilloscope
1		Frequency Counter
1		80-140VDC Power Supply
1		50 Ohm 2 Watt Load for +5V supply. +5V must be loaded for card to operate.

6. TESTING PROCESS

6.1 Supply voltages

6.1.1 Connect 50-ohm load to 2PL-5 or 2PL-6 and 2PL-4 or 2PL-7.

6.1.2 Connect power supply to DCPL-1(+) and DCPL-2(-).

6.1.3 Set power supply to desired voltage between 80V and 140V. You can pre-set the power supply or start at 0V and increase until all green LEDs come on.

6.1.3.1 Supply voltages should be; (Use 2PL-4 or 2PL-7 as common).

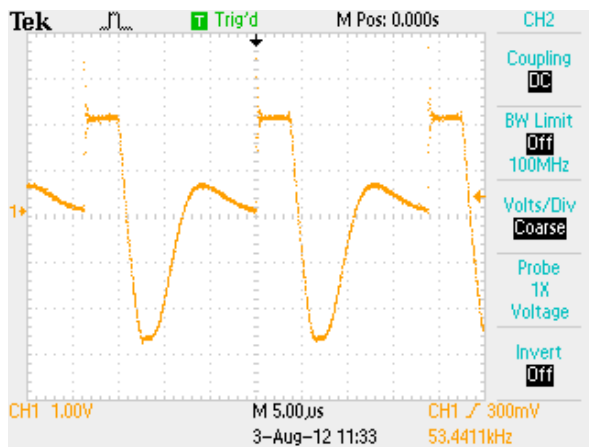
2PL-9 = +24VDC	2PL-8 = -24VDC	2PL-5 = +5VDC
2PL-3 = +15VDC	2PL-2 = -15VDC	2PL-6 = +5VDC
		(RV1 Adjusts +5)

6.2 Isolated +70VDC

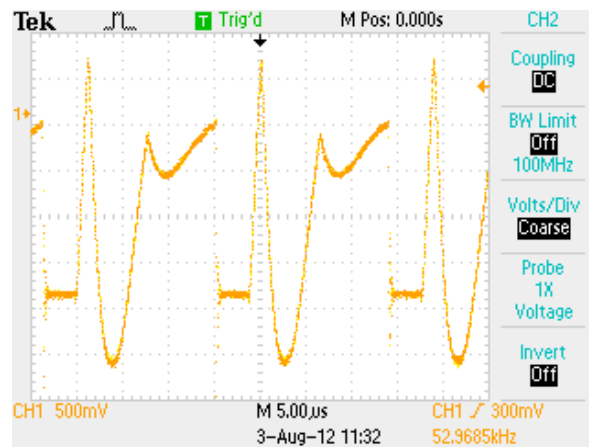
6.2.1 Measure +70VDC between 70PL-1(+) and 70PL-2(-). Connect an ohmmeter between 4PL-1 and 4PL-2. Meter should read an open. Short 70PL-1 to 70PL-3, relay K86 should pick-up and 4PL-1 and 4PL-2 should read less than 1 ohm.

6.3 SHVI/SHVM Power Supply.

6.3.1 Using SQPL-3 or SQPL-4 as common, measure a 50KHz symmetrical square wave at SQPL-1 and SQPL-2 of 13 to 16V peak-to-peak amplitude.



SQPL-1



SQPL-2

6.4 Contactor Driver and Control On

6.4.1 Connect ohmmeter to 4PL-5 and 4PL-3. Connect voltmeter to MDPL-1(+) and MDPL-2(-). The ohmmeter should read less than 1 ohm and voltmeter should read 0V.

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6.4.2 Connect GDPL-17 to DCOM.

6.4.3 Connect GDPL-15 to DCOM. Relay K1 should pick-up, voltmeter should go to =100VDC (with input source set at 120VDC) and ohmmeter should read an open.

6.4.4 Move ohmmeter from 4PL-3 to 4PL-4 and meter should read less than 1 ohm.

6.5 *TEST COMPLETE *****

7. NOTES

7.1 None at this time.

8. ATTACHMENTS

8.1 None at this time.