GE Energy	**Functional Testing Specification**
Parts & Repair Services ***Louisville, KY***	**LOU-GE-AMI215HPGAG1**

Test Procedure for a AMI Digital PEG Module

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A	Initial release	R. Johnson	10/10/2013

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Functional test procedure for a GEAMI Digital Peg Module

1. SCOPE

1.1 This is a functional testing procedure for an AMI215HPGAG1, AMI200GPACG1AAA, and AMI200GPCCG1AAC. The last two listed numbers are individual cards..

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** See electronic folder DS5200 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 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.

Quantity	Reference #	Description
2		Fluke 87 DMM (or Equivalent)
1	H188955	PEG Test Station
1		O-Scope
1		AC Current Probe
1		Amtrak SCR firing Box
1		24 Volt DC power supply
2		Fiber Optic cables 24" inches

6. TESTING PROCESS

6.1 Setup and Connections

6.1.1 Install unit into test fixture.

6.1.2 Connect A to the chassis terminals TB1-1 and C to TB1-3.

6.1.3 Connect terminal pins of TB2 pin 1, 2 and 3 together chassis Ground labeled 1 to TB2-1.

6.1.4 Connect 24VDC input (Black and Red Cable) into PWR-IN connector on the AMI200GPCCG1AAC card.

6.1.5 Before connecting the power connector to the AMI peg module adjust the output to 24VDC +/- 0.1 volt.

6.1.6 Connect the Ground on the PEG to chassis ground TB-2-1 with a wire jumper.

6.1.7 Turn off the 24VDC power supply and connect the POWER cable to the white 2 pin connector located next to F1.

6.1.8 Connect the JD connector.

6.1.9 Connect the fiber optic cable labeled "INPUT" to the RX firing CMD dark blue fiber connector.

6.1.10 Connect the fiber output TX grey fiber connector to the fiber connector on the top of the test fixture beside the 5 volts output jacks.

6.1.11 Connect the FIBER POWER Orange cable Yellow connector to 5 volts test pin.

6.1.12 Connect the FIBER POWER GND Blue cable Black connector to the ground test pin.

6.1.13 Connect the output to JE1 and JE2 black wires.

6.1.14 Ensure black burg jumper is in the 2-3 position. This is located on the AMI200GPCCG1AAC card

6.2 Powering Up

6.2.1 Apply power to the 24VDC power supply.

6.2.2 Verify the 5 volt and 24 volt amber LEDS come on.

6.2.3 Verify the 5 DC volt test jacks on the AMI peg module board is 5 volts- 5%.

6.2.4 Verify the test point TP16 to TP17 measures (2.5 volts nom.) 2.495 to 2.505 volts with no drive signal applied. SCR firing box should be off.

6.2.5 Connect the DMM to the GREEN (negative) and Blue (positive) jacks labeled 5 volt output on the top on the test fixture.

6.2.6 Verify that the meter measures 5 VDC (+/- 5%)

6.2.7 Move the positive lead to the orange jack and verify 5VDC (+/- 5%).

6.2.8 Turn on the AMTRAK SCR firing box and the fiber signal is connected to the firing box in the drawer.

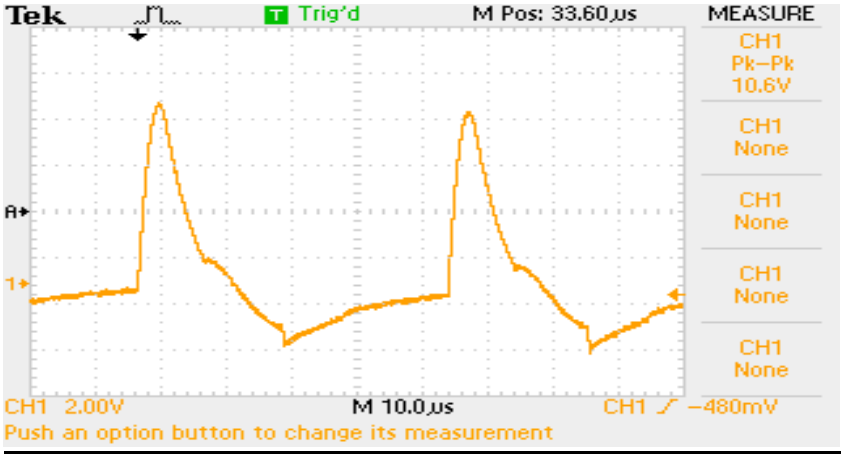
6.2.9 Adjust the drive signal if needed until the GREEN firing CMD led lights. The LED should light when the firing box is adjusted to 20% to 40%.

6.2.10 Connect the AC current probe to one of the SCR gate(white wires) located on the back the of the test fixture

6.2.11 Apply power to the unit by setting switch to “ON W/FAN” position.

6.2.12 Adjust Variac for 120VAC +/- 1% between green jacks on top of fixture labeled 120VAC with reference to ACOM (black jack in middle).

6.2.13 Using a current probe verify steady firing pulses on O-Scope as 9.5amps to 11.5amps Peak-to-Peak amplitude. (Depending on the scope you are using you may have to measure the current as a peak to peak voltage. It will read approx. 9.5 11.5V).



6.2.14 Verify the BLUE (Healthy ok) LED on assembly is on.

6.2.15 Verify the 5 volt output test jacks blue and orange voltages measure less than 1 volt DC. With the green jack as ground.

6.2.16 Power down entire fixture for ten seconds then reapply power by setting switch back to “ON W/FAN” position.

6.2.17 Allow unit to run for a minimum of one hour then re-verify pulse amplitude.

6.2.18 Cycle unit every 30 minutes, be sure you give enough time for the unit turn off completely

6.3 ***TEST COMPLETE ***

7. Notes

7.1 Data Sheet

Job # _____

Serial # _____ Burn-in Start _____

Date _____

Data Sheet for _____ AMI215HPGAG1 Burn-in Stop _____

Test Procedure _____ LOU-GE-AMI215HPGAG1 Technician _____

Test Procedure Step	Nominal	Lower Limit	Pre-Burn in Results	Post Burn in Results	Upper Limit	Pot Values If applicable CW	CCW	Pass/Fail
6.2.2	ON							
6.2.3	5VDC	4.75VDC			5.25VDC			
6.2.4	2.5VDC	2.495VDC			2.505VDC			
6.2.6	5VDC	4.75VDC			5.25VDC			
6.2.7	5VDC	4.75VDC			5.25VDC			
6.2.9	ON							
6.2.13	10.5AP/P	9.5A P/P			11.5A P/P			
6.2.14	ON							
6.2.15	<1VDC				<1VDC			

8. Attachment

8.1 Picture of Test Fixture