



GE Energy

Functional Testing Specification

Parts & Repair Services
Louisville, KY

LOU-GED-IS200JPDEG

Test Procedure for a Mark Vie Power Distribution Board

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A	Initial release	Steve Pharris	06/11/2009
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DATE 06/11/2009	DATE	DATE	DATE 6/12/2009

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1. SCOPE

1.1 This is a functional testing procedure for an IS200JPDEG1.

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 **PDM Card – JPDE Design Document**

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)
1		Power Supply

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6. TESTING PROCESS

6.1 Testing Procedure

- 6.1.1 Check for proper fuses in fuse holders.
- 6.1.2 With DMM verify short between JD1, 2, and 3.
- 6.1.3 With DMM verify short between JD4, 5, and 6.
- 6.1.4 Measure between JD1 and JD4 for approx 22K ohms
- 6.1.5 Measure from JD1 to HW1 for 2.15K ohms.
- 6.1.6 Measure from JD4 to HW2 for 2.15K ohms.
- 6.1.7 Set all switches to OFF position.
- 6.1.8 Connect 20VDC to JD1 with respect to JD6. **DO NOT ENERGIZE!**
- 6.1.9 Connect 24VDC to P2-50 with respect to P1-1. **DO NOT ENERGIZE!**
- 6.1.10 Connect common on DMM to common from 24VDC power supply
- 6.1.11 Connect + lead from DMM to P1-4
- 6.1.12 Verify 0 VDC
- 6.1.13 Turn on power supplies
- 6.1.14 Verify 0VDC
- 6.1.15 Close switch 1
- 6.1.16 Verify DMM reads approx 4.3VDC
- 6.1.17 Open switch 1 and close switch 2
- 6.1.18 Verify DMM reads approx 2.5VDC.
- 6.1.19 Open switch 2 and close switch 3
- 6.1.20 Verify DMM reads approx 1.3VDC.
- 6.1.21 Open switch 3 and turn off power supplies.
- 6.1.22 Connect + from DMM to P1-5
- 6.1.23 Apply 24VDC verify 0VDC on DMM.
- 6.1.24 Apply 20VDC verify DMM reads approx. 3.6VDC
- 6.1.25 Turn off power supplies.
- 6.1.26 Connect DMM to P1-6.
- 6.1.27 Connect 20VDC to JPS1-5 with respect to JD6. **DO NO ENERGIZE!**
- 6.1.28 Connect + from DMM to P1-6
- 6.1.29 Apply 24VDC verify 0VDC on DMM
- 6.1.30 Apply 20VDC verify DMM reads approx 5.25VDC.
- 6.1.31 Turn off power supplies.

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6.1.32 Connect 20VDC to JPS2-5 with respect to JD6. **DO NO ENERGIZE!**

6.1.33 Apply 24VDC verify 0VDC on DMM

6.1.34 Apply 20VDC verify DMM reads approx 3.2VDC.

6.1.35 Turn off power supplies.

6.1.36 Static check the following components: R37-R40, and D31-D32

6.1.37 Verify with DMM a short between all chassis ground eyelets

6.1.38 Verify with DMM the connections from P1 to P2 per page 6 of the schematic.

6.1.39 Check device ID and serial number on CPU

6.2 *TEST COMPLETE *****

7. NOTES

7.1 None at this time

8. ATTACHMENTS

8.1 None at this time